

ACIDIC PRECIPITATION IN ONTARIC STUDY

ANNUAL STATISTICS OF CONCENTRATION AND DEPOSITION
- DAILY PRECIPITATION AND AIR MONITORING NETWORK, 1983

Atomspheric Processes Studies Unit Air Quality Meteorology Section Ontario Ministry of the Environment Air Resources Branch 880 Bay Street, 4th Floor Toronto, Ontario Canada, M55 128

July 1985

ARB-109-85-AOM APT 022/85

A.P.J.O.S. Coordination Office Ontario Ministry of the Environment 6th Floor, 40 St. Clair Avenue West Toronto, Ontario Canada, M4V 1P5 Project Co-ordinator: Dr. T. G. Brydges

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INTRODUCTION

INTRODUCTION

This report was prepared by David Chung. The statistical summaries presented in this report pertain to the 1983 analytical results obtained from the Acidic Precipitation in Ontario Study (APIOS) daily precipitation and air monitoring network. The relevant data are listed in previous reports, #ARB-043-85-AOM and #ARB-108-85-AOM. All available data are utilized in the calculations except results reported as being unreliable (i.e. results are identified as unreasonable values by using the validation procedures; detailed description of the validation procedures is available from the ministry upon request.) or approximate (i.e., inexact results are reported due to laboratory difficulties, such as that encountered in calibration, and that the sample cannot be re-analyzed to confirm the reported values). In a very few cases, concentration levels exceeded the upper limit of the range of the chemical analysis. Rather than using the upper limit, a decision was made to exclude these values from the statistics generated in this report. If a reported value is labelled as W, it is replaced by a "zero". W is the level which the analytical technique cannot distinguish from zero. If a level is recorded less than the detection limit T, a value corresponding to one half the detection limit is utilized for statistical calculations as reported in the statistical summaries.

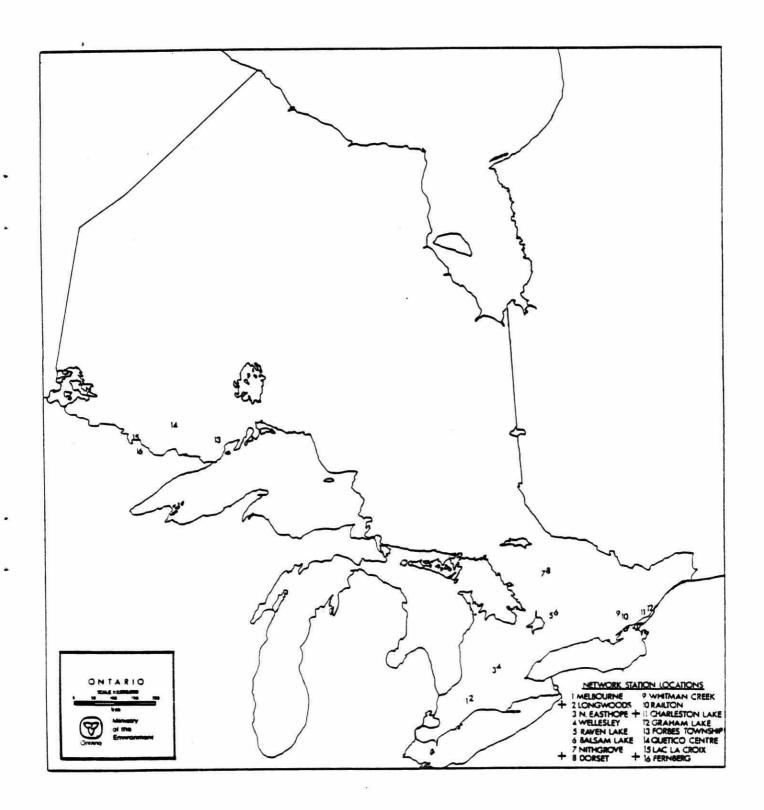
The reported precipitation gauge depth (standard rain gauge or nipher shielded snow gauge) is utilized in the calculation of deposition. If a rain gauge value is not available then the collected sample volume is converted to its equivalent precipitation depth and is used in the deposition calculation.

In the air concentration statistical summaries, "Nitric" represents "Nitric Acid" and "Totl NO3" represents total nitrates calculated by the summation of particulate "Nitrate" and "Nitric Acid".

The statistical summaries presented in Parts III to VII include the number of samples, mean (arithmetic/geometric), standard deviation (arithmetic/geometric), maximum, minimum and quartiles and volume weighted means using precipitation gauge depths where appropriate.

PART II STATION DESCRIPTION AND LOCATION MAP

STATION SITE LOCATION MAP APIOS DAILY PRECIPITATION AND AIR MONITORING NETWORK *



* ALL SITES ARE PRECIPITATION MONITORING SITES. THOSE LABELLED WITH (+)
ARE ALSO EQUIPPED WITH AIR MONITORING INSTRUMENTATION

APIOS DAILY PRECIPITATION AND AIR MONITORING NETWORK SITE LOCATIONS *

AREA	MOE REGION	STATION NAME	ELEVATION	LATITUDE	LONGITUDE	UTM COORDINATES		
AREA	MOL REGION		(m above MSL)	(North)	(West)	(Northing)	(Easting)	
London	Southwestern	Longwoods Conservations Area*	239	42053'02"	81028:50"	4747600	460700	
		Melbourne	213	42047'15"	81033'23"	4737100	454500	
		North Easthope	375	43024'21"	80053'35"	4805650	508650	
		Wellesley	344	43028'13"	800451351	4812700	519600	
Dorset	Central	Dorset Laboratory*	320	45013'23"	78055'49"	5009600	662450	
		Nithgrove	325	45012'01"	79004'14"	5006800	651600	
		Balsam Lake Provincial Park	259	4403713511	78051'22"	4943500	670170	
		Raven Lake	274	44036'40"	78054'43"	4941550	665700	
Kingston	Southeastern	Charleston Lake Provincial Park*	92	44029:54"	76002'30"	4927500	417150	
		Graham Lake	130	4403522"	75051144"	4937450	431550	
		Railton	156	44022'34"	7603513311	4914700	373200	
		Whitman Creek	137	44029'07"	76049119"	4927200	355100	
Thunder Bay	Northwestern	Fernberg*	506	47056:51"	91029'26"	5311000	612000	
~~~~~~~~~~~~~~~~~ <u>~</u>	NO COMPOSANCE ACTION MODILITIES CHARLES TO TOURS.	Lac La Croix	368	48021114"	92012'32"	5355900	558400	
		Forbes Township	324	48034158"	89038156"	5384150	304800	
27		Quetico Centre	420	48024144"	91012'08"	5399750	632100	

^{*} All sites monitor precipitation concentrations. Sites labelled (*) also monitor air concentrations.

### PART III

SUMMARY STATISTICS OF PRECIPITATION CONCENTRATION BY STATION

#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : BALSAM LAKE/DAILY/AEROCHEM	#06
-------------------------------------------	-----

PERIOD OF REPORT	:	JAN 3,83	TO DEC 30,83				PAGE: 1	
		PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
# OF SAMPLES	:	134.0	83.0	67.00	107.00	110.0000	109.00	108.000
MAXIMUM	ï	55.0	112.0	4.97	6.68	1.4840	12.80	6.200
HINIMUH	:	0.1	3.8	3.69	3.30	0.0134	0.20	0.000
RANGE	:	54.9	108.3	1.28	3.38	1.4706	12.60	6.200
ARITH. MEAN	:	7.1	27.0	4.28	4.51	0.0930	2.70	0.566
ARITH. STD. DEV	:	8.5	18.2	0.28	0.57	0.1492	2.25	0.686
GEOM. MEAN	:	3.5	21.7	4.27	4.47	0.0652	1.96	0.380
GEOM. STD. DEV.	:	3.9	2.0	1.07	1.13	2.1006	2.34	2.682
1ST QUARTILE	:	1.4	14.8	4.09	4.12	0.0397	1.20	0.230
2ND QUARTILE	:	4.2	24.2	4.24	4.41	0.0624	2.13	0.405
3RD QUARTILE	:	8.8	35.1	4.48	4.68	0.1065	3.65	0.720
VOL. WGT. MEAN	:	****	22.8	*****	****	0.0667	2.12	0.374

STATION NAME : BALSAM LAKE/DAILY/AEROCHEM #06

PERIOD OF REPORT	:	JAN 3,83	TO DEC 30,83				PAGE : 2	
		CALCIUM	CHLORIDE	MAGNESIM	POTASSIM	SODIUM	МОТИОННА	FREE H+
		MG/L	MG/L	MG/L	MG/L	HG/L	AS N MG/L	LAB MG/L
# OF SAMPLES	:	84.000	107.000	83.000	86.000	86.000	86.000	107.0000
MUHIXAM	:	2.930	1.370	0.655	0.205	0.270	1.490	0.5012
MINIHUM	•	0.030	0.020	0.000	0.000	0.000	0.000	0.0002
RANGE	:	2.900	1.350	0.655	0.205	0.270	1.490	0.5010
ARITH. MEAN		0.312	0.193	0.046	0.037	0.051	0.294	0.0554
ARITH. STD. DEV	:	0.461	0.208	0.087	0.035	0.048	0.308	0.0677
GEOM. MEAN	:	0.195	0.134	0.036	0.029	0.045	0.145	0.0312
GEOM. STD. DEV.	:	2.404	2.317	2.710	2.461	2.323	5.097	3.6729
1ST QUARTILE	:	0.110	0.070	0.012	0.020	0.020	0.078	0.0200
2ND QUARTILE	:	0.165	0.140	0.020	0.030	0.037	0.198	0.0367
3RD QUARTILE	:	0.340	0.215	0.047	0.042	0.060	0.405	0.0750
VOL. WGT. MEAN	:	0.217	0.114	0.033	0.030	0.036	0.237	0.0415

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## ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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#### STATION NAME : CHARLESTON LAKE/DAILY/AEROCHEM #11

PERIOD OF REPORT : JAN 5,83				TO DEC 29,83			PAGE: 1			
			PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N	
			ММ	UHHO/CM			MG/L	MG/L	MG/L	
	OF SAMPLES	:	110.0	66.0	52.00	84.00	83.0000	85.00	85.000	
M	AXIHUM	:	43.3	86.0	5.26	5.94	0.2040	7.45	1.650	
И	INIMUM	:	0.1	1.6	3.78	3.78	0.0144	0.00	0.000	
R	NIGE	:	43.2	84.4	1.48	2.16	0.1896	7.45	1.650	
AI	RITH. MEAN	:	8.6	21.6	4.42	4.63	0.0630	2.15	0.392	
AI	RITH. STD. DEV	:	8.3	17.4	0.36	0.50	0.0423	1.81	0.356	
GI	EOM. MEAN	:	4.8	15.5	4.40	4.61	0.0512	1.49	0.267	
GI	EOH. STD. DEV.	:	3.6	2.4	1.08	1.11	1.9129	2.52	2.581	
13	ST QUARTILE	:	2.1	7.6	4.13	4.28	0.0283	0.70	0.125	
21	ND QUARTILE	ŧ	6.3	15.3	4.44	4.55	0.0467	1.55	0.250	
31	RD QUARTILE	:	12.1	31.3	4.66	4.90	0.0832	3.30	0.580	
V	DL. WGT. MEAN	:	****	18.5	*****	****	0.0557	1.69	0.297	

#### STATION NAME : CHARLESTON LAKE/DAILY/AEROCHEM #11

PERIOD OF REPORT	:	JAN 5,83	TO DEC 29,83				PAGE : 2	
		CALCIUM	CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N	FREE H+ LAB
		MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
# OF SAMPLES	•	76.000	83.000	76.000	76.000	76.000	76.000	84.0000
HAXIHUH	:	0.810	1.440	0.160	0.110	0.200	0.910	0.1660
HINIHUM .	:	0.000	0.000	0.000	0.000	0.000	0.008	0.0011
RANGE	:	0.810	1.440	0.160	0.110	0.200	0.902	0.1648
ARITH. MEAN	:	0.146	0.117	0.024	0.023	0.046	0.238	0.0387
ARITH. STD. DEV		0.147	0.172	0.025	0.022	0.046	0.218	0.0364
GEON. MEAN		0.101	0.099	0.023	0.022	0.050	0.138	0.0234
GEOM. STD. DEV.	:	2.627	2.676	2.492	2.891	2.510	3.299	3.1687
1ST QUARTILE	:	0.050	0.030	0.010	0.005	0.020	0.067	0.0126
2ND QUARTILE	:	0.100	0.080	0.017	0.020	0.030	0.198	0.0282
3RD QUARTILE	:	0.175	0.130	0.032	0.032	0.050	0.355	0.0525
VOL. WGT. MEAN		0.109	0.078	0.017	0.017	0.037	0.190	0.0328

## ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION	NAME	: DOK:	SEI/DAILY	/ AERUCHEM	FU

PERIOD OF REPORT	:	JAN 1,83	TO JAN 2,84				PAGE: 1	
		PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N
*		MM	UNHO/CM		2	MG/L	MG/L	MG/L
# OF SAMPLES	:	164.0	87.0	79.00	122.00	126.0000	119.00	119.000
HAXIHUH	:	44.2	142.0	4.90	6.13	0.5260	18.00	2.200
MINIMUM	:	0.0	1.2	3.62	3.55	0.0174	0.20	0.000
RANGE	1	44.2	140.8	1.28	2.58	0.5086	17.80	2.200
ARITH. MEAN	:	6.5	26.3	4.27	4.50	0.0880	2.60	0.496
ARITH. STD. DEV	:	7.8	21.2	0.28	0.48	0.0851	2.64	0.426
GEOM. MEAN	1	2.8	19.7	4.26	4.47	0.0662	1.74	0.349
GEOM. STD. DEV.	:	4.5	2.2	1.07	1.11	2.0474	2.52	2.771
1ST QUARTILE	:	0.9	11.4	4.09	4.20	0.0382	0.90	0.160
2ND QUARTILE	:	3.4	22.5	4.24	4.38	0.0671	1.72	0.385
3RD QUARTILE	:	9.1	34.0	4.49	4.73	0.0994	3.45	0.670
VOL. WGT. MEAN	:	*****	22.0	*****	*****	0.0704	1.97	0.363

STATION NAME : DORSET/DAILY/AEROCHEM

PERIOD OF REPORT : JAN 1,83 TO JAN 2,84 PAGE : 2

		CALCIUM	CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N	FREE H+ LAB
		MG/L	MG/L	MG/L	MG/L	MG/L	NG/L	MG/L
# OF SAMPLES	:	97.000	114.000	95.000	96.000	97.000	101.000	122.0000
MUNIXAM	:	1.350	0.760	0.285	0.440	0.255	1.120	0.2818
HUHINIM		0.000	0.000	0.000	0.000	0.000	0.000	0.0007
RANGE	:	1.350	0.760	0.285	0.440	0.255	1.120	0.2811
ARITH. MEAN		0.204	0.184	0.035	0.047	0.068	0.255	0.0497
ARITH. STD. DEV		0.246	0.149	0.043	0.053	0.056	0.260	0.0449
GEOM. MEAN	•	0.128	0.142	0.025	0.043	0.058	0.145	0.0317
GEOH. STD. DEV.	•	2.782	2.146	2.661	2.705	2.199	4.595	2.9994
1ST QUARTILE	:	0.065	0.080	0.010	0.017	0.030	0.061	0.0176
2ND QUARTILE	•	0.120	0.130	0.025	0.040	0.050	0.161	0.0422
3RD QUARTILE	:	0.240	0.230	0.040	0.060	0.080	0.380	0.0624
VOL. WGT. MEAN	:	0.170	0.124	0.028	0.035	0.051	0.204	0.0383

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STATION NAME : FERNBERG/DAILY/AEROCHEM

#16

PERIOD OF REPORT		JAN 4,83	TO DEC 14,83				PAGE : 1	
		PRECIP.	CONDUCT.	PH FIELD	PH Lab	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N
		ММ	инно/см			MG/L	MG/L	MG/L
# OF SAMPLES	:	76.0	50.0	0.00	61.00	67.0000	67.00	66.000
MUNIXAM	:	90.6	21.7	*****	6.84	0.1526	5.05	0.970
MUNINIM	:	0.1	2.2	*****	4.32	0.0144	0.02	0.000
RANGE	:	90.5	19.5	****	2.52	0.1382	5.02	0.970
ARITH. MEAN	:	11.0	9.2	*****	5.34	0.0303	1.10	0.229
ARITH. STD. DEV	:	13.1	4.6	*****	0.63	0.0182	0.92	0.209
GEOH. MEAN	:	5.7	8.2	*****	5.31	0.0275	0.79	0.193
GEOM. STD. DEV.	:	4.0	1.7	****	1.12	1.4898	2.45	2.132
1ST QUARTILE	:	2.6	5.6	*****	4.86	0.0206	0.45	0.100
2ND QUARTILE	:	7.5	8.4	*****	5.22 ,	0.0260	. 0.90	0.170
3RD QUARTILE	:	14.8	10.8	****	5.64	0.0355	1.38	0.265
VOL. WGT. MEAN	:	*****	8.0	*****	*****	0.0259	0.89	0.174

***** : INSUFFICIENT DATA OR NOT APPLICABLE NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

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STATION NAME : FERNBERG/DAILY/AEROCHEM #16

PERIOD OF REPORT	:	JAN 4,83	TO DEC 14,83				PAGE : 2	
		CALCIUM	CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N	FREE H+ Lab
		MG/L	HG/L	MG/L	MG/L	HG/L	HG/L	MG/L
# OF SAMPLES	•	56.000	63.000	57.000	57.000	55.000	53.000	61.0000
MUHIXAM	:	0.590	0.300	0.095	0.125	0.135	1.940	0.0479
HINIHUM	:	0.000	0.000	0.000	0.005	0.000	0.010	0.0001
RANGE	:	0.590	0.300	0.095	0.120	0.135	1.930	0.0477
ARITH. MEAN	•	0.143	0.084	0.022	0.043	0.037	0.324	0.0091
ARITH. STD. DEV	:	0.132	0.071	0.021	0.028	0.031	0.372	0.0096
GEOM. MEAN	:	0.110	0.115	0.020	0.034	0.031	0.207	0.0045
GEOM. STD. DEV.	:	2.201	1.979	2.140	2.209	2.560	2.713	4.2360
1ST QUARTILE	:	0.060	0.035	0.010	0.022	0.020	0.124	0.0021
2ND QUARTILE	:	0.100	0.070	0.015	0.035	0.030	0.208	0.0057
3RD QUARTILE		0.165	0.100	0.025	0.060	0.045	0.376	0.0120
VOL. WGT. MEAN	:	0.146	0.066	0.022	0.047	0.041	0.262	0.0072

#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME	:	FORBES	TWSP/DAILY/AEROCHEM	#13
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PERIOD OF REPORT	:	JAN 15,83	TO DEC 29,83				PAGE: 1	
		PRECIP.	CONDUCT.	PH FIELD	PH Lab	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N
		ММ	UHHO/CM		LAU	MG/L	MG/L	HG/L
# OF SAMPLES	:	106.0	52.0	0.00	62.00	66.0000	66.00	67.000
HUHIXAH	:	48.6	48.2	*****	5.87	1.6580	7.50	1.320
HINIHUM	:	0.1	2.4	*****	3.98	0.0164	0.00	0.000
RANGE	:	48.5	45.8	*****	1.89	1.6416	7.50	1.320
ARITH. MEAN	:	6.5	12.3	*****	4.97	0.0704	1.52	0.243
ARITH. STD. DEV		9.1	9.4	*****	0.42	0.2118	1.45	0.252
GEOM. MEAN	:	2.5	9.8	*****	4.96	0.0362	1.08	0.183
GEOM. STD. DEV.	:	4.4	2.0	****	1.09	2.1294	2.35	2.510
1ST QUARTILE	:	0.8	5.7	*****	4.68	0.0245	0.57	0.080
2ND QUARTILE	:	2.9	8.9	*****	5.03	0.0296	1.00	0.165
3RD QUARTILE	:	7.4	13.9	*****	5.24	0.0384	1.77	0.285
VOL. WGT. MEAN	:	*****	11.0	*****	*****	0.0813	1.19	0.167

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## ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

0.085

0.040

STATION NAME : FORBES TWSP/DAILY/AEROCHEM #13

0.230

0.134

3RD QUARTILE

VOL. WGT. MEAN :

PERIOD OF REPORT	:	JAN 15,83	TO	DEC 29,83				PAGE : 2	
		CALCIUM		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	MUINONIM	FREE H+
		MG/L		HG/L	MG/L	MG/L	MG/L	AS N Mg/L	LAB MG/L
# OF SAMPLES	:	56.000		66.000	56.000	57.000	56.000	59.000	62.0000
MAXIMUM	:	0.580		0.250	0.130	0.090	0.185	1.550	0.1047
MUNINIM	:	0.000		0.000	0.000	0.000	0.000	0.000	0.0013
RANGE	:	0.580		0.250	0.130	0.090	0.185	1.550	0.1034
ARITH. MEAN		0.151		0.056	0.023	0.034	0.037	0.254	0.0167
ARITH. STD. DEV	:	0.140		0.058	0.026	0.025	0.037	0.292	0.0185
GEOM. MEAN	:	0.108		0.117	0.026	0.030	0.027	0.171	0.0106
GEOM. STD. DEV.	:	2.532		2.717	2.645	2.487	2.891	3.019	2.6225
1ST QUARTILE	:	0.060		0.000	0.008	0.015	0.015	0.060	0.0055
2ND QUARTILE	:	0.090		0.040	0.015	0.030	0.025	0.150	0.0093
						5), det 3 montostos			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

0.030

0.020

0.050

0.032

0.055

0.028

0.330

0.222

0.0191

0.0136

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## ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GRAHAM LAKE/DAILY/AEROCHEM #12

PERIOD OF REPORT	:	JAN 6,83	TO DEC 29,83				PAGE: 1	
		PRECIP.	CONDUCT.	PH	PH	TOTAL H+	SULPHATE	NITRATE
		ММ	UHHO/CH	FIELD	LAB	TO PH8.3 MG/L	MG/L	AS N MG/L
# OF SAMPLES	:	121.0	69.0	54.00	82.00	92.0000	90.00	90.000
MAXIMUM	1	36.1	154.0	5.77	6.41	0.4700	12.00	5.800
MINIHUM	:	0.3	4.0	3.59	3.31	0.0156	0.25	0.030
RANGE	:	35.8	150.0	2.18	3.10	0.4544	11.75	5.770
ARITH. MEAN	:	8.4	26.3	4.46	4.64	0.0705	2.76	0.555
ARITH. STD. DEV	:	8.1	27.0	0.46	0.58	0.0637	2.30	0.695
GEOM. MEAN	:	4.9	18.4	4.44	4.60	0.0530	1.94	0.343
GEOM. STD. DEV.	:	3.2	2.3	1.11	1.13	2.0926	2.45	2.765
1ST QUARTILE	:	1.8	9.7	4.17	4.24	0.0300	1.00	0.160
2ND QUARTILE	:	5.0	16.8	4.35	4.52	0.0529	2.25	0.390
3RD QUARTILE		12.2	30.4	4.74	4.93	0.0944	3.55	0.725
VOL. WGT. MEAN	:	*****	22.3	****	****	0.0584	2.16	0.358

### 12-

## ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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#12

STATION NAME : ... AHAM LAKE/DAILY/AEROCHEM

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PERIOD OF REPORT	:	JAN 6,83	TO DEC 29,83				PAGE: 2	
		CALCIUM	CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N	FREE H+ Lab
		MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
# OF SAMPLES		75.000	90.000	75.000	74.000	76.000	71.000	82.0000
MAXIHUM	•	1.710	2.450	0.300	0.270	0.435	2.180	0.4898
MINIHUM		0.000	0.000	0.000	0.000	0.000	0.002	0.0004
RANGE	•	1.710	2.450	0.300	0.270	0.435	2.178	0.4894
ARITH. MEAN	•	0.252	0.243	0.045	0.062	0.095	0.333	0.0450
ARITH. STD. DEV	:	0.326	0.330	0.059	0.059	0.108	0.315	0.0618
GEOM. MEAN	:	0.147	0.149	0.026	0.041	0.075	0.221	0.0232
GEOM. STD. DEV.	:	2.908	3.017	3.104	3.198	3.024	2.907	3.8456
1ST QUARTILE	:	0.055	0.060	0.010	0.020	0.020	0.118	0.0116
2ND QUARTILE	:	0.135	0.165	0.025	0.045	0.050	0.252	0.0302
3RD QUARTILE	•	0.280	0.300	0.050	0.090	0.147	0.440	0.0550
VOL. WGT. MEAN	:	0.167	0.127	0.031	0.038	0.052	0.282	0.0331

#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LAC LA CROIX/DAILY/AEROCHEM #15

PERIOD OF REPORT : DEC 24,82 TO DEC 15,83 PAGE : 1

		PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N
		MM	UMHO/CM			MG/L	MG/L	MG/L
# OF SAMPLES	:	64.0	41.0	0.00	47.00	49.0000	51.00	51.000
MAXIMUM	:	68.8	26.7	*****	6.90	0.1158	4.05	1.090
HINIHUH	•	0.1	2.3	*****	4.33	0.0128	0.00	0.000
RANGE	:	68.7	24.4	*****	2.57	0.1030	4.05	1.090
ARITH. MEAN	:	10.1	10.6	*****	5.11	0.0365	1.14	0.246
ARITH. STD. DEV	:	12.3	6.3	*****	0.60	0.0181	0.94	0.246
GEOM. MEAN	:	5.0	8.8	*****	5.08	0.0330	0.79	0.178
GEOM. STD. DEV.	:	3.7	1.9	*****	1.12	1.5601	2.82	3.230
1ST QUARTILE	:	1.6	5.1	*****	4.66	0.0228	0.52	0.105
2ND QUARTILE	:	5.9	9.8	*****	4.94	0.0333	0.88	0.165
3RD QUARTILE		13.0	14.0	*****	5.42	0.0452	1.45	0.315
VOL. WGT. MEAN	:	****	9.4	*****	*****	0.0328	0.87	0.167

### 14-

## ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LAC LA CROIX/DAILY/AEROCHEM #15

PERIOD OF REPORT		DEC 24,82	TO	DEC 15,83				PAGE : 2	
		CALCIUM		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	MUINOMMA	FREE H+
		MG/L		HG/L	MG/L	MG/L	MG/L	AS N MG/L	LAB MG/L
# OF SAMPLES	:	44.000		51.000	45.000	44.000	43.000	46.000	47.0000
HUHIXAH	:	0.600		0.200	0.105	0.095	0.135	1.760	0.0468
MINIHUM	:	0.005		0.000	0.002	0.000	0.000	0.001	0.0001
RANGE	:	0.595		0.200	0.103	0.095	0.135	1.759	0.0466
ARITH. MEAN	:	0.122		0.063	0.021	0.031	0.031	0.253	0.0136
ARITH. STD. DEV	:	0.136		0.055	0.022	0.023	0.028	0.306	0.0113
GEOH. MEAN		0.068		0.088	0.013	0.029	0.030	0.111	0.0077
GEOH. STD. DEV.	×	3.229		2.453	2.647	2.539	2.472	5.232	4.0189
1ST QUARTILE	1	0.040		0.020	0.008	0.015	0.008	0.040	0.0035
2ND QUARTILE	:	0.070		0.050	0.010	0.030	0.022	0.175	0.0110
3RD QUARTILE	:	0.160		0.100	0.025	0.045	0.040	0.312	0.0207
VOL. WGT. MEAN	:	0.100		0.043	0.017	0.029	0.029	0.179	0.0125

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LONGWOODS/DAILY/AEROCHEM #02

PERIOD OF REPORT	:	JAN 6,83	TO DEC 22,83				PAGE: 1	
		PRECIP.	CONDUCT.	PH Field	PH Lab	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N
1		ММ	UNHO/CM			MG/L	NG/L	HG/L
# OF SAMPLES	:	117.0	69.0	47.00	83.00	95.0000	89.00	88.000
MUNIXAM	:	43.6	67.0	4.79	6.34	0.3520	9.25	2.100
MINIMUM		0.2	5.0	3.56	3.64	0.0106	0.65	0.010
RANGE	:	43.4	62.0	1.23	2.70	0.3414	8.60	2.090
ARITH. MEAN	:	8.1	28.6	4.13	4.39	0.0844	3.46	0.541
ARITH. STD. DEV	:	8.6	13.9	0.29	0.40	0.0600	1.96	0.386
GEOM. MEAN	:	4.2	25.2	4.12	4.38	0.0670	2.97	0.420
GEOM. STD. DEV.	:	3.5	1.7	1.07	1.09	2.0351	1.78	2.221
1ST QUARTILE	:	1.4	19.0	3.94	4.14	0.0424	2.20	0.305
2ND QUARTILE	:	4.6	25.4	4.11	4.31	0.0724	3.07	0.440
3RD QUARTILE	:	11.2	37.2	4.35	4.53	0.1048	4.10	0.700
VOL. WGT. MEAN	:	*****	27.1	****	****	0.0747	3.03	0.400

## ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LONGWOODS/DAILY/AEROCHEM

#02

PERIOD OF REPORT	:	JAN 6,83	TO DEC 22,83				PAGE : 2	
		CALCIUM	CHLORIDE	MAGNESIM	POTASSIM	SODIUM	MUINOMIA	FREE H+
		MG/L	MG/L	MG/L	MG/L	MG/L	AS N Mg/L	LAB MG/L
# OF SAMPLES	:	73.000	87.000	76.000	79.000	78.000	77.000	83.0000
MUHIXAM		1.520	1.000	0.310	0.210	0.515	1.540	0.2291
MINIHUM	:	0.030	0.030	0.005	0.000	0.000	0.026	0.0005
RANGE		1.490	0.970	0.305	0.210	0.515	1.514	0.2286
ARITH. MEAN	:	0.365	0.231	0.066	0.053	0.078	0.359	0.0538
ARITH. STD. DEV	:	0.310	0.184	0.060	0.036	0.082	0.282	0.0368
GEOM. MEAN	:	0.266	0.177	0.047	0.044	0.053	0.272	0.0403
GEOM. STD. DEV.	:	2.255	2.106	2.283	2.155	2.646	2.190	2.5269
1ST QUARTILE	:	0.145	0.105	0.030	0.030	0.025	0.159	0.0282
2ND QUARTILE	:	0.275	0.180	0.045	0.045	0.050	0.271	0.0473
3RD QUARTILE	:	0.430	0.300	0.080	0.065	0.100	0.480	0.0700
VOL. WGT. MEAN		0.274	0.161	0.050	0.041	0.058	0.327	0.0475

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## ONTARIO MINISTRY OF THE ENVIRONMENT. SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

PAGE: 1

STATION NAME : MELBOURNE/DAILY/AEROCHEM

PERIOD OF REPORT : JAN 6,83 TO DEC 28,83

#01

		5.5%	1.5					
		PRECIP.	CONDUCT.	PH FIELD	PH Lab	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N
*		ММ	инно/см	LIECD	CAB	MG/L	MG/L	MG/L
# OF SAMPLES	:	105.0	72.0	47.00	80.00	90.0000	86.00	88.000
MUNIXAM	:	58.4	110.0	4.79	5.29	0.5580	8.60	2.100
MININUM	:	0.3	5.6	3.30	3.61	0.0152	0.45	0.005
RANGE	:	58.0	104.4	1.49	1.68	0.5428	8.15	2.095
ARITH. MEAN	:	9.4	33.5	4.16	4.32	0.1054	3.50	0.618
ARITH. STD. DEV	:	10.0	19.4	0.34	0.31	0.0936	1.86	0.446
GEOM. MEAN	:	5.2	28.9	4.15	4.31	0.0823	2.98	0.470
GEOM. STD. DEV.	:	3.3	1.7	1.09	1.07	1.9690	1.86	2.337
1ST QUARTILE	:	2.2	20.2	3.91	4.11	0.0539	2.07	0.310
2ND QUARTILE	:	5.2	29.1	4.17	4.31	0.0786	3.17	0.485
3RD QUARTILE	:	12.9	41.6	4.34	4.44	0.1263	4.55	0.830
VOL. WGT. MEAN	:	*****	29.0	*****	*****	0.0909	3.06	0.451

## ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MELBOURNE/DAILY/AEROCHEM

#01

PERIOD OF REPORT	:	JAN 6,83	TO	DEC 28,83				PAGE : 2	
		CALCIUM		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	HUINOHHA	FREE H+
		HG/L		MG/L	MG/L	HG/L	MG/L	AS N MG/L	LAB MG/L
# OF SAMPLES	:	74.000		88.000	76.000	77.000	78.000	77.000	80.0000
MAXIMUH		1.520		1.050	0.265	0.300	0.370	1.600	0.2455
MUHIMIM	:	0.040		0.000	0.005	0.000	0.000	0.040	0.0051
RANGE	:	1.480		1.050	0.260	0.300	0.370	1.560	0.2403
ARITH. MEAN	•	0.346		0.241	0.057	0.058	0.090	0.370	0.0599
ARITH. STD. DEV	:	0.327		0.204	0.057	0.049	0.087	0.294	0.0424
GEOM. MEAN		0.239		0.182	0.038	0.044	0.068	0.276	0.0478
GEOM. STD. DEV.	:	2.364		2.264	2.528	2.575	2.682	2.215	2.0493
1ST QUARTILE		0.120		0.100	0.020	0.027	0.030	0.153	0.0359
2ND QUARTILE	1	0.225		0.195	0.035	0.050	0.057	0.272	0.0495
3RD QUARTILE		0.410		0.310	0.065	0.070	0.123	0.505	0.0768
VOL. WGT. MEAN		0.302		0.165	0.052	0.043	0.064	0.310	0.0493

STATION NAME : NITHGROVE/DAILY/AEROCHEM #

#07

PERIOD OF REPORT : JAN 4,83 TO		DEC 30,83			PAGE : 1				
		PRECIP.	CONDUCT.  UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	
# OF SAMPLES	•	128.0 /25	80.0	61.00	97.00	106.0000	104.00	104.000	
MUNIXAM		311.9	151.0	5.05	6.93	0.3560	15.80	2.000	
MINIHUM	:	0.2 0 2	4.3	3.55	3.56	0.0154	0.15	0.000	
RANGE		311.7	146.7	1.50	3.37	0.3406	15.65	2.000	
ARITH. MEAN	1	10.2 7.8	23.9	4.25	4.64	0.0673	2.40	0.433	
ARITH. STD. DEV	:	27.8 7.0	19.9	0.30	0.62	0.0561	2.33	0.362	
GEOM. MEAN		5.0	18.8	4.23	4.60	0.0530	1.65	0.324	
GEOM. STD. DEV.	:	3.2	2.0	1.07	1.13	1.9612	2.45	2.485	
1ST QUARTILE	:	2.4	13.0	4.05	4.24	0.0327	1.05	0.160	
2ND QUARTILE	:	5.7	21.1	4.23	4.48	0.0569	1.70	0.355	
3RD QUARTILE	1	11.7	28.8	4.39	4.80	0.0796	3.30	0.610	
VOL. WGT. MEAN		*****	21.9	*****	*****	0.0614	2.00	0.350	

#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : NITHGROVE/DAILY/AEROCHEM

#07

PERIOD OF REPORT	:	JAN 4,83	TO	DEC 30,83				PAGE : 2	
		CALCIUM		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N	FREE H+ Lab
		MG/L		MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
# OF SAMPLES	:	86.000		99.000	86.000	82.000	85.000	88.000	97.0000
HUHIXAH	:	1.160		0.830	0.280	0.255	0.205	1.460	0.2754
MINIMUM	:	0.010		0.005	0.000	0.005	0.000	0.000	0.0001
RANGE	į	1.150		0.825	0.280	0.250	0.205	1.460	0.2753
ARITH. MEAN	•	0.218		0.181	0.039	0.061	0.059	0.288	0.0425
ARITH. STD. DEV	*	0.216		0.149	0.045	0.047	0.043	0.266	0.0427
GEOM. MEAN		0.154		0.132	0.033	0.048	0.052	0.194	0.0229
GEOM. STD. DEV.	:	2.325		2.347	2.300	2.017	2.008	2.761	4.2048
1ST QUARTILE	:	0.100		0.075	0.015	0.030	0.030	0.098	0.0150
2ND QUARTILE	:	0.145		0.130	0.025	0.047	0.045	0.193	0.0320
3RD QUARTILE	:	0.250		0.230	0.040	0.072	0.077	0.405	0.0562
VOL. HGT. HEAN	:	0.186		0.124	0.030	0.046	0.048	0.252	0.0392

## ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH EASTHOPE/DAILY/AEROCHEM #03

PERIOD OF REPORT : JAN 6,83 TO					PAGE: 1				
	PRECIP.	CONDUCT.  UNHO/CM	PH FIELD	PH Lab	TOTAL H+ TO PH8.3 MG/L	SULPHATE Mg/L	NITRATE AS N MG/L		
:	130.0	76.0	57.00	82.00	104.0000	99.00	102.000		
:	82.4	73.0	5.48	5.83	0.2960	10.00	2.100		
:	0.2	2.6	3.60	3.60	0.0110	0.20	0.000		
:	82.2	70.4	1.88	2.23	0.2850	9.80	2.100		
:	8.3	26.1	4.24	4.45	0.0739	3.13	0.559		
:	10.4	14.4	0.34	0.39	0.0541	1.95	0.492		
:	4.3	22.0	4.23	4.44	0.0585	2.53	0.402		
:	3.5	1.9	1.08	1.09	2.0158	2.04	2.431		
1	1.7	15.7	4.04	4.18	0.0355	1.63	0.240		
	4.6	23.7	4.23	4.39	0.0632	2.97	0.400		
:	11.0	35.1	4.43	4.69	0.0924	4.10	0.640		
:	*****	23.9	*****	*****	0.0606	2.56	0.359		
	; ; ;	PRECIP.  MM  : 130.0 : 82.4 : 0.2 : 82.2 : 8.3 : 10.4 : 4.3 : 3.5 : 1.7 : 4.6 : 11.0	PRECIP. CONDUCT.  MM UHHO/CM  : 130.0 76.0  : 82.4 73.0  : 0.2 2.6  : 82.2 70.4  : 8.3 26.1  : 10.4 14.4  : 4.3 22.0  : 3.5 1.9  : 1.7 15.7  : 4.6 23.7  : 11.0 35.1	PRECIP. CONDUCT. PH FIELD  HM UHHO/CM  1 130.0 76.0 57.00  2 82.4 73.0 5.48  3 0.2 2.6 3.60  3 82.2 70.4 1.88  3 8.3 26.1 4.24  10.4 14.4 0.34  4.3 22.0 4.23  3.5 1.9 1.08  1.7 15.7 4.04  4.6 23.7 4.23  11.0 35.1 4.43	PRECIP. CONDUCT. PH FIELD LAB  HM UNHO/CH  1 130.0 76.0 57.00 82.00  1 82.4 73.0 5.48 5.83  1 0.2 2.6 3.60 3.60  1 82.2 70.4 1.88 2.23  1 8.3 26.1 4.24 4.45  1 10.4 14.4 0.34 0.39  1 4.3 22.0 4.23 4.44  1 3.5 1.9 1.08 1.09  1 1.7 15.7 4.04 4.18  1 4.6 23.7 4.23 4.39  1 11.0 35.1 4.43 4.69	PRECIP. CONDUCT. PH FIELD LAB TOTAL H+ TO PHB.3 MG/L  130.0 76.0 57.00 82.00 104.0000  82.4 73.0 5.48 5.83 0.2960  0.2 2.6 3.60 3.60 0.0110  82.2 70.4 1.88 2.23 0.2850  8.3 26.1 4.24 4.45 0.0739  10.4 14.4 0.34 0.39 0.0541  4.3 22.0 4.23 4.44 0.0585  3.5 1.9 1.08 1.09 2.0158  1.7 15.7 4.04 4.18 0.0355  4.6 23.7 4.23 4.39 0.0632  11.0 35.1 4.43 4.69 0.0924	PRECIP. COHDUCT. PH LAB TOTAL H+ TO PH8.3 MG/L MG/L MG/L  130.0 76.0 57.00 82.00 104.0000 99.00  82.4 73.0 5.48 5.83 0.2960 10.00  0.2 2.6 3.60 3.60 0.0110 0.20  82.2 70.4 1.88 2.23 0.2850 9.80  83.3 26.1 4.24 4.45 0.0739 3.13  10.4 14.4 0.34 0.39 0.0541 1.95  4.3 22.0 4.23 4.44 0.0585 2.53  3.5 1.9 1.08 1.09 2.0158 2.04  1.7 15.7 4.04 4.18 0.0355 1.63  4.6 23.7 4.23 4.39 0.0632 2.97  11.0 35.1 4.43 4.69 0.0924 4.10		

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH EASTHOPE/DAILY/AEROCHEM #03

STATION HARE . NO		ACTION E	DA1										
PERIOD OF REPORT	: JA	N 6,83	TO D	EC 26,83			6		P	AGE : 2			
		CALCIUM	C	HLORIDE	•	1AGNES I M	POTASSIM	SODIUM		AHHONIUM AS N	F	REE H+	
		MG/L		MG/L		MG/L	MG/L	MG/L		MG/L		MG/L	
# OF SAMPLES		80.000		94.000		78.000	79.000	80.000		78.000	3	82.0000	
HUHIXAM	:	1.080		0.910		0.300	0.215	0.470		1.110		0.2512	
MINIMUM		0.010		0.030		0.005	0.008	0.000		0.000		0.0015	
RANGE	:	1.070		0.880		0.295	0.207	0.470		1.110		0.2497	
ARITH. MEAN		0.255		0.207		0.049	0.058	0.093		0.336		0.0490	
ARITH. STD. DEV	•	0.217		0.163		0.048	0.043	0.093		0.227		0.0415	
GEOM. MEAN		0.189		0.159		0.035	0.046	0.067		0.284		0.0351	
GEOИ. STD. DEV.	:	2.235		2.083		2.303	1.989	2.437		1.897		2.4765	
1ST QUARTILE	:	0.110		0.090		0.020	0.030	0.040		0.169		0.0197	
2ND QUARTILE	:	0.200		0.160		0.035	0.042	0.060		0.252		0.0403	
3RD QUARTILE		0.320		0.270		0.060	0.072	0.105		0.450		0.0638	
VOL. WGT. MEAN	:	0.225		0.145		0.040	0.045	0.066		0.305		0.0387	
TOL. HOT. HEAR		35.00											

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

**\$**10

STATION NAME . RAILTON/BATET/ALROCHEM	STATION	NAME		RAILION/DAILY/AEROCHEM	
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PERIOD OF REPORT	:	JAN 6,83	TO DEC 29,83			PAGE: 1				
		PRECIP.	CONDUCT.	PH FIELD	PH LAB	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N		
a a		нн	инно/сн			MG/L	MG/L	MG/L		
# OF SAMPLES	•	82.0	51.0	44.00	59.00	59.0000	62.00	62.000		
MAXIMUM	:	80.7	235.0	6.33	6.90	0.5480	23.50	3.700		
MINIMUM	:	0.2	3.0	3.35	3.54	0.0140	0.10	0.040		
RANGE	:	80.5	232.0	2.98	3.36	0.5340	23.40	3.660		
ARITH. MEAN	:	11.3	30.9	4.37	4.50	0.0876	3.58	0.568		
ARITH. STD. DEV	:	12.5	34.8	0.49	0.59	0.0870	4.17	0.604		
GEOM. MEAN	:	6.3	21.8	4.34	4.47	0.0648	2.31	0.380		
GEOM. STD. DEV.	:	3.5	2.3	1.11	1.13	2.1068	2.71	2.517		
1ST QUARTILE	:	2.4	11.9	4.10	4.10	0.0358	1.18	0.225		
2ND QUARTILE	:	7.8	22.4	4.34	4.42	0.0636	2.75	0.390		
3RD QUARTILE	:	16.2	37.6	4.56	4.74	0.1058	4.05	0.685		
VOL. WGT. MEAN	:	*****	23.5	*****	*****	0.0630	2.40	0.372		

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## ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIDS - ACIDIC PRECIPITATION IN ONTARIO STUDY

SIAILOM	MANE	٠	KAIL ION/ DAIL I/ AEKOCHEM	

#10

PERIOD OF REPORT	٠.	JAN 6,83	TO DEC 29,83				PAGE: 2	
		CALCIUM	CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM As n	FREE H+ LAB
		MG/L	HG/L	MG/L	MG/L	MG/L	MG/L	MG/L
# OF SAMPLES	:	56.000	61.000	56.000	56.000	56.000	56.000	59.0000
MUHIXAH		1.730	0.940	0.320	0.125	0.530	1.330	0.2884
HIHIHUH	:	0.010	0.005	0.000	0.000	0.000	0.020	0.0001
RANGE	:	1.720	0.935	0.320	0.125	0.530	1.310	0.2883
ARITH. MEAN		0.310	0.186	0.043	0.038	0.065	0.375	0.0550
ARITH. STD. DEV	ŧ	0.345	0.201	0.055	0.030	0.090	0.296	0.0564
GEOM. MEAN	:	0.184	0.117	0.029	0.028	0.062	0.254	0.0316
GEOM. STD. DEV.		2.911	2.719	2.913	2.740	2.800	2.717	3.9342
1ST QUARTILE	:	0.090	0.050	0.010	0.015	0.020	0.168	0.0172
2ND QUARTILE	:	0.180	0.115	0.025	0.037	0.042	0.313	0.0380
3RD QUARTILE	:	0.400	0.205	0.060	0.050	0.072	0.530	0.0759
VOL. WGT. MEAN	:	0.235	0.144	0.039	0.032	0.069	0.306	0.0390

## ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

24.8

STATION NAME : RAVEN LAKE/DAILY/AEROCHEM #05

PERIOD OF REPORT : JAN 3,83 TO DEC 29,83 PAGE: 1 PRECIP. CONDUCT. PH TOTAL H+ SULPHATE PH NITRATE TO PH8.3 FIELD LAB AS N MM UHHO/CH MG/L MG/L MG/L # OF SAMPLES 144.0 90.0 73.00 116.00 123.0000 124.00 123.000 MAXIMUM 0.5720 : 29.4 120.0 5.06 6.26 23.50 5.900 MUMINIM : 0.2 3.8 3.49 3.31 0.0122 0.05 0.005 RANGE 116.2 29.2 1.57 2.95 0.5598 23.45 5.895 ARITH. MEAN 29.4 6.4 4.21 4.50 0.0785 2.92 0.640 ARITH. STD. DEV : 6.6 21.2 0.31 0.50 0.0681 2.88 0.769 GEOM. MEAN 3.5 22.7 0.0608 0.394 4.20 4.47 1.98 GEOM. STD. DEV. : 3.4 2.1 1.08 1.11 2.0286 2.63 2.961 1ST QUARTILE 1.4 15.3 4.01 4.16 0.0360 1.20 0.220 2ND QUARTILE 3.9 24.2 4.16 4.39 0.0625 2.07 0.490 3RD QUARTILE 9.2 40.1 4.39 4.72 0.0946 3.97 0.820

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0.0746

2.34

0.435

***** : INSUFFICIENT DATA OR NOT APPLICABLE NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

VOL. WGT. MEAN

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# ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION	NAME	:	RAVEN	LAKE/DAILY/AEROCHEM	
STATION	NAME	ě	KAYEN	LAKE/DATET/ AEROCHEM	

#05

PERIOD OF REPORT	;	JAN 3,83	TO DEC 29,83				PAGE : 2	
		CALCIUM	CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AHHONIUM As N	FREE H+ Lab
		MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
# OF SAMPLES	:	99.000	122.000	99.000	99.000	97.000	101.000	116.0000
MAXIMUM	:	2.850	2.000	0.670	0.165	0.375	1.460	0.4898
HUHIHIH	:	0.005	0.000	0.000	0.000	0.005	0.000	0.0005
RANGE .	:	2.845	2.000	0.670	0.165	0.370	1.460	0.4892
ARITH. MEAN	:	0.329	0.235	0.047	0.042	0.069	0.323	0.0518
ARITH. STD. DEV	:	0.428	0.277	0.079	0.035	0.058	0.303	0.0558
GEOH. MEAN		0.191	0.169	0.037	0.035	0.051	0.204	0.0319
GEOM. STD. DEV.	:	2.925	2.360	2.590	2.375	2.208	4.220	3.1383
1ST QUARTILE	:	0.100	0.080	0.012	0.020	0.030	0.097	0.0188
2ND QUARTILE	:	0.190	0.150	0.025	0.030	0.050	0.239	0.0412
3RD QUARTILE		0.340	0.270	0.050	0.052	0.090	0.420	0.0692
VOL. WGT. MEAN	:	0.258	0.142	0.035	0.038	0.055	0.280	0.0401

#### ONTARIO MINISTRY OF THE ENVIRONHENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : QUETICO CENTRE/DAILY/AEROCHEM #14

PERIOD OF REPORT	:	FEB 20,83	TO DEC 22,83				PAGE: 1	
		PRECIP.	CONDUCT.	PH FIELD	PH Lab	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N
		нн	UHHO/CM			HG/L	MG/L	MG/L
# OF SAMPLES	:	92.0	54.0	0.00	53.00	59.0000	59.00	59.000
HUHIXAH	:	62.2	30.0	****	6.96	0.0626	5.40	0.870
MUNINUM	:	0.1	1.5	*****	4.42	0.0152	0.00	0.000
RANGE	:	62.1	28.5	*****	2.54	0.0474	5.40	0.870
ARITH. HEAN	:	8.7	9.4	*****	5.27	0.0279	1.04	0.165
ARITH. STD. DEV	:	10.9	5.9	*****	0.57	0.0106	0.95	0.143
GEOM. MEAN	:	3.9	7.7	*****	5.24	0.0262	0.75	0.144
GEOM. STD. DEV.	:	4.3	1.9	*****	1.11	1.4151	2.66	2.559
1ST QUARTILE	:	1.3	4.7	****	4.82	0.0200	0.30	0.055
2ND QUARTILE		4.7	8.3	****	5.18	0.0243	0.95	0.140
3RD QUARTILE	:	12.0	11.9	*****	5.60	0.0325	1.30	0.220
VOL. WGT. MEAN	:	*****	8.6	*****	*****	. 0.0278	0.90	0.139

**** : INSUFFICIENT DATA OR NOT APPLICABLE NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

## ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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#### STATION NAME : QUETICO CENTRE/DAILY/AEROCHEM #14

PERIOD OF REPORT : FEB 20,83 TO DEC 22,83 PAGE :	PERIOD OF REPORT	: FEB 20.83	TO DEC 22,83	PAGE :
--------------------------------------------------	------------------	-------------	--------------	--------

		CALCIUM	CHLORIDE	MAGNESIM	POTASSIM	SODIUM	MINONIUM	FREE H+
		HG/L	HG/L	MG/L	MG/L	MG/L	AS N MG/L	LAB MG/L
# OF SAMPLES	:	52.000	55.000	52.000	51.000	50.000	57.000	53.0000
MUMIXAM	:	0.640	0.340	0.150	0.135	0.135	1.090	0.0380
MINIMUM	•	0.005	0.000	0.000	0.000	0.000	0.000	0.0001
RANGE	:	0.635	0.340	0.150	0.135	0.135	1.090	0.0379
ARITH. MEAN	:	0.143	0.045	0.023	0.036	0.028	0.219	0.0097
ARITH. STD. DEV	:	0.140	0.058	0.029	0.030	0.029	0.223	0.0089
GEOM. MEAN	:	0.084	0.103	0.032	0.036	0.032	0.140	0.0054
GEOM. STD. DEV.	:	3.226	2.779	3.018	2.719	2.558	3.527	3.7114
1ST QUARTILE	•	0.050	0.000	0.005	0.011	0.010	0.063	0.0025
211D QUARTILE	:	0.080	0.030	0.010	0.030	0.020	0.138	0.0066
3RD QUARTILE	:	0.220	0.060	0.032	0.047	0.035	0.319	0.0137
VOL. WGT. HEAN	:	0.129	0.038	0.019	0.030	0.025	0.176	0.0096

#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION	NAME	:	WELLESLEY/DAILY/AEROCHEM	#04

PERIOD OF REPORT : JAN 6,83 TO			TO DEC 29,83		×	PAGE : 1			
			PRECIP.	CONDUCT.	PH FIELD	PH Lab	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N
			мм	UNHO/CM		155 NF	MG/L	MG/L	HG/L
	# OF SAMPLES	•	125.0	74.0	59.00	100.00	107.0000	106.00	105.000
	MUNIXAM	:	51.9	64.0	5.05	6.64	0.3440	8.55	1.960
	MINIMUM	:	0.3	2.5	3.19	3.81	0.0088	0.10	0.000
	RANGE	:	51.6	61.5	1.86	2.83	0.3352	8.45	1.960
	ARITH. MEAN	:	8.5	25.0	4.14	4.48	0.0849	3.05	0.538
	ARITH. STD. DEV	:	8.9	13.4	0.43	0.52	0.0603	1.92	0.438
	GEOM. MEAN	:	4.8	21.1	4.12	4.45	0.0661	2.36	0.419
	GEOM. STD. DEV.	:	3.2	1.9	1.11	1.11	2.1130	2.31	2.170
	1ST QUARTILE	:	2.1	15.0	3.91	4.14	0.0404	1.63	0.235
	2ND QUARTILE	:	5.4	22.1	4.20	4.38	0.0675	2.80	0.400
	3RD QUARTILE	:	12.8	33.8	4.42	4.67	0.1168	4.15	0.685
	VOL. WGT. MEAN	:	*****	22.8	*****	*****	0.0682	2.35	0.353

**** : INSUFFICIENT DATA OR NOT APPLICABLE NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

# ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : WELLESLEY/DAILY/AEROCHEM

#04

PERIOD OF REPORT	:	JAN 6,83	TO DEC 29,83				PAGE : 2	
		CALCIUM	CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMHONIUM As N	FREE H+ Lab
		MG/L	HG/L	MG/L	MG/L	MG/L	MG/L	MG/L
# OF SAMPLES	:	89.000	105.000	88.000	91.000	91.000	83.000	100.0000
MUHIXAM		1.140	0.660	0.455	0.185	0.710	1.190	0.1549
HINIMUH	:	0.000	0.000	0.000	0.000	0.000	0.000	0.0002
RANGE	:	1.140	0.660	0.455	0.185	0.710	1.190	0.1547
ARITH. MEAN	:	0.252	0.175	0.047	0.028	0.063	0.322	0.0502
ARITH. STD. DEV	:	0.254	0.137	0.062	0.029	0.085	0.243	0.0355
GEOM. MEAN	:	0.174	0.146	0.034	0.034	0.043	0.242	0.0331
GEOM. STD. DEV.	:	2.569	2.310	2.810	2.680	3.243	2.397	3.3449
1ST QUARTILE	:	0.080	0.070	0.015	0.005	0.020	0.144	0.0214
2ND QUARTILE	:	0.155	0.140	0.025	0.020	0.040	0.235	0.0422
3RD QUARTILE	:	0.310	0.230	0.065	0.035	0.077	0.470	0.0733
VOL. WGT. MEAN	:	0.216	0.119	0.037	0.022	0.044	0.269	0.0383

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## ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : WHITMAN CREEK/DAILY/AEROCHEM #09

PERIOD OF REPORT	:	JAN 7,83	TO DEC 23,83				PAGE: 1	
		PRECIP.	CONDUCT.	PH Field	PH Lab	TOTAL H+ To PH8.3	SULPHATE	NITRATE As n
		MM	UMHO/CM			MG/L	MG/L	MG/L
# OF SAMPLES	•	85.0	50.0	34.00	62.00	64.0000	62.00	64.000
MAXIMUM	:	40.5	143.0	5.22	6.90	0.3180	17.80	1.680
MINIHUM	:	0.9	5.4	3.51	3.63	0.0160	0.25	0.040
RANGE	:	39.6	137.6	1.71	3.27	0.3020	17.55	1.640
ARITH. MEAN	:	9.0	34.4	4.32	4.46	0.0861	3.53	0.580
ARITH. STD. DEV	:	7.9	28.4	0.36	0.57	0.0665	3.18	0.456
GEOM. MEAN	:	5.9	26.2	4.31	4.43	0.0670	2.55	0.413
GEOM. STD. DEV.	:	2.7	2.1	1.09	1.12	2.0418	2.29	2.408
1ST QUARTILE	:	2.4	16.3	4.03	4.11	0.0396	1.47	0.195
2ND QUARTILE	•	6.8	24.3	4.34	4.39	0.0674	2.60	0.415
3RD QUARTILE	:	13.4	42.1	4.55	4.65	0.1031	4.45	0.890
VOL. WGT. HEAN		****	29.6	*****	*****	0.0727	2.99	0.421

***** : INSUFFICIENT DATA OR NOT APPLICABLE NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

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### ONTARIO MINISTRY OF THE ENVIRONHENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WHITMAN CREEK/DAILY/AEROCHEM #09

PERIOD OF REPORT : JAN	7,83	TO	DEC 23,83	PAGE : 2

		CALCIUM	CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N	FREE H+ LAB
		MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
# OF SAMPLES	•	53.000	64.000	51.000	54.000	54.000	54.000	62.0000
HUNIXAH		1.430	0.940	0.235	0.265	0.580	1.590	0.2344
HINIHUH	:	0.010	0.000	0.000	0.005	0.000	0.001	0.0001
RANGE	ŧ	1.420	0.940	0.235	0.260	0.580	1.589	0.2343
ARITH. MEAN	:	0.328	0.183	0.048	0.051	0.069	0.366	0.0576
ARITH. STD. DEV	:	0.330	0.181	0.051	0.043	0.094	0.322	0.0515
GEOM. MEAN	:	0.204	0.156	0.033	0.039	0.070	0.236	0.0350
GEOM. STD. DEV.	į	2.841	2.293	2.606	2.222	2.509	3.250	3.7135
1ST QUARTILE	:	0.100	0.070	0.012	0.025	0.022	0.133	0.0202
2ND QUARTILE	:	0.235	0.120	0.030	0.040	0.045	0.261	0.0403
3RD QUARTILE	:	0.360	0.240	0.065	0.065	0.067	0.505	0.0750
VOL. WGT. MEAN	:	0.222	0.136	0.035	0.039	0.048	0.324	0.0474

# PART IV SUMMARY STATISTICS OF PRECIPITATION CONCENTRATION BY REGION

#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

### STATION NAME : CENTRAL REGION/DAILY PRECIPITATION

PERIOD OF REPORT		JAN 1,83	TO JAN 2,84				PAGE: 1	
		PRECIP.	CONDUCT.	PH FIELD	PH Lab	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N
		1484	UMHO/CM			MG/L	MG/L	MG/L
# OF SAMPLES	i	570.0	340.0	280.00	442.00	465.0000	456.00	454.000
MUNIXAM	:	311.9	151.0	5.06	6.93	1.4840	23.50	6.200
HIHIHUH	:	0.0	1.2	3.49	3.30	0.0122	0.05	0.000
RANGE	:	311.9	149.8	1.57	3.63	1.4718	23.45	6.200
ARITH. MEAN	:	7.4	26.7	4.25	4.53	0.0820	2.67	0.537
ARITH. STD. DEV	:	14.8	20.2	0.29	0.54	0.0959	2.55	0.595
GEOM. MEAN	:	3.6	20.7	4.24	4.50	0.0613	1.83	0.362
GEOM. STD. DEV.	:	3.8	2.1	1.07	1.12	2.0415	2.49	2.737
1ST QUARTILE	:	1.6	13.9	4.06	4.19	0.0360	1.05	0.195
2ND QUARTILE	:	4.3	23.0	4.23	4.42	0.0625	1.95	0.400
3RD QUARTILE	ï	9.8	34.6.	4.45	4.74	0.0974	3.60	0.725
VOL. WGT. MEAN	:	*****	22.8	*****	*****	0.0683	2.10	0.380

**** : INSUFFICIENT DATA OR NOT APPLICABLE NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

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#### ONTARIO MINISTRY OF THE ENVIRONHENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

#### STATION NAME : CENTRAL REGION/DAILY PRECIPITATION

PERIOD OF REPORT	: .	JAN 1,83	TO JAN 2,84				PAGE : 2	
		CALCIUM	CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AHHONIUH AS N	FREE H+
		MG/L	HG/L	MG/L	MG/L	MG/L	MG/L	LAB MG/L
# OF SAMPLES	:	366.000	442.000	363.000	363.000	365.000	376.000	442.0000
MUNIXAM	•	2.930	2.000	0.670	0.440	0.375	1.490	0.5012
MUNINUM	:	0.000	0.000	0.000	0.000	0.000	0.000	0.0001
RANGE	:	2.930	2.000	0.670	0.440	0.375	1.490	0.5011
ARITH. MEAN	1	0.266	0.200	0.042	0.046	0.062	0.290	0.0500
ARITH. STD. DEV	:	0.357	0.207	0.066	0.044	0.052	0.285	0.0537
GEOM. MEAN	:	0.164	0.145	0.032	0.038	0.052	0.170	0.0295
GEOM. STD. DEV.	•	2.662	2.294	2.571	2.446	2.195	4.170	3.4667
1ST QUARTILE	•	0.090	0.080	0.010	0.020	0.030	0.080	0.0182
2ND QUARTILE	:	0.150	0.140	0.025	0.035	0.045	0.200	0.0380
3RD QUARTILE	•	0.290	0.235	0.045	0.060	0.080	0.410	0.0646
VOL. WGT. MEAN	:	0.206	0.126	0.032	0.037	0.048	0.241	0.0397

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## ONTARIO MINISTRY OF THE ENVIRONMENT SUHMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTHWESTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT	:	DEC 24,82	TO JAN 2,84				PAGE: 1	
		PRECIP.	CONDUCT.	PH FIELD	PH Lab	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N
		MM	UMHO/CM			NG/L	MG/L	MG/L
# OF SAMPLES	•	338.0	197.0	0.00	223.00	241.0000	243.00	243.000
MUNIXAM	i	90.6	48.2	*****	6.96	1.6580	7.50	1.320
MUNIMUM	ĭ	0.1	1.5	****	3.98	0.0128	0.00	0.000
RANGE	•	90.5	46.7	*****	2.98	1.6452	7.50	1.320
ARITH. MEAN	:	8.8	10.4	*****	5.17	0.0419	1.21	0.221
ARITH. STD. DEV	:	11.3	6.9	*****	0.57	0.1125	1.11	0.218
GEOM. MEAN	:	3.9	8.6	*****	5.14	0.0304	0.85	0.174
GEOM. STD. DEV.	:	4.3	1.9	*****	1.11	1.7055	2.57	2.578
1ST QUARTILE	•	1.5	5.4	*****	4.74	0.0215	0.45	0.090
2ND QUARTILE	:	4.8	8.5	*****	5.08	0.0278	0.90	0.160
3RD QUARTILE	:	11.6	12.4	*****	5.44	0.0374	1.45	0.260
VOL. WGT. MEAN		*****	9.2	*****	*****	0.0404	0.96	0.162

***** : INSUFFICIENT DATA OR NOT APPLICABLE NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

# ONTARIO MINISTRY OF THE ENVIRONMENT SUHMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTHWESTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT	:	DEC 24,82	TO JAN 2,84				PAGE: 2	
		CALCIUM	CHLORIDE	MAGNESIM	POTASSIM	SODIUM	MUINONNA N SA	FREE H+ Lab
		HG/L	MG/L	MG/L	HG/L	MG/L	MG/L	MG/L
# OF SAMPLES	:	208.000	235.000	210.000	209.000	204.000	215.000	223.0000
MUMIXAM	:	0.640	0.340	0.150	0.135	0.185	1.940	0.1047
MINIMUM	:	0.000	0.000	0.000	0.000	0.000	0.000	0.0001
RANGE	:	0.640	0.340	0.150	0.135	0.185	1.940	0.1046
ARITH. MEAN	:	0.141	0.062	0.022	0.037	0.034	0.262	0.0123
ARITH. STD. DEV	:	0.137	0.063	0.024	0.027	0.032	0.301	0.0132
GEOM. MEAN	1	0.092	0.106	0.022	0.032	0.030	0.155	0.0067
GEOM. STD. DEV.	:	2.783	2.475	2.540	2.471	2.610	3.562	3.7381
1ST QUARTILE	1	0.050	0.020	0.010	0.020	0.015	0.068	0.0035
2ND QUARTILE	:	0.085	0.050	0.015	0.030	0.025	0.167	0.0082
3RD QUARTILE	:	0.190	0.095	0.030	0.050	0.040	0.340	0.0178
VOL. WGT. MEAN	:	0.128	0.048	0.020	0.035	0.031	0.211	0.0105

## ONTARIO MINISTRY OF THE ENVIRONHENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

#### STATION NAME : SOUTHEASTERN REGION/DAILY PRECIPITATION

PERIOD OF REPOR	<b>8T</b> :	JAN 1,83	TO JAN 2,84				PAGE: 1	
		PRECIP.	CONDUCT.	PH FIELD	PH Lab	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
# OF SAMPLES	:	398.0	236.0	184.00	287.00	298.0000	299.00	301.000
MAXIMUM	:	80.7	235.0	6.33	6.90	0.5480	23.50	5.800
MUNIMUM	:	0.1	1.6	3.35	3.31	0.0140	0.00	0.000
RANGE	:	80.6	233.4	2.98	3.59	0.5340	23.50	5.800
ARITH. MEAN	:	9.2	27.7	4.40	4.57	0.0752	2.91	0.517
ARITH. STD. DEV	<i>,</i> :	9.2	27.3	0.42	0.56	0.0652	2.91	0.550
GEOM. MEAN	:	5.3	19.6	4.38	4.54	0.0575	1.97	0.340
GEOM. STD. DEV.	. :	3.2	2.3	1.10	1.12	2.0473	2.54	2.613
1ST QUARTILE	:	2.3	10.8	4.11	4.20	0.0333	1.00	0.160
2ND QUARTILE	:	6.3	20.6	4.38	4.47	0.0569	2.22	0.360
3RD QUARTILE	:	13.1	35.9	4.66	4.80	0.0966	3.77	0.710
VOL. WGT. MEAN		*****	22.9	*****	*****	0.0614	2.24	0.356

***** : INSUFFICIENT DATA OR NOT APPLICABLE
NOTE(1): PRECIP VALUES REPRESENT GAUGE DEPTH

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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0.119

#### STATION NAME : SOUTHEASTERN REGION/DAILY PRECIPITATION

0.177

VOL. WGT. MEAN :

PERIOD OF REPORT	:	JAN 1,83	TO JAN 2,84				PAGE : 2	
		CALCIUM	CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N	FREE H+ Lab
		MG/L	MG/L	MG/L	MG/L	MG/L	NG/L	MG/L
# OF SAMPLES	:	260.000	298.000	258.000	260.000	262.000	257.000	287.0000
MAXIMUM		1.730	2.450	0.320	0.270	0.580	2.180	0.4898
MUNIMUM	:	0.000	0.000	0.000	0.000	0.000	0.001	0.0001
RANGE		1.730	2.450	0.320	0.270	0.580	2.179	0.4897
ARITH. MEAN	:	0.249	0.183	0.039	0.043	0.069	0.321	0.0479
ARITH. STD. DEV	1	0.298	0.241	0.050	0.044	0.089	0.290	0.0523
GEOM. MEAN	1	0.148	0.128	0.027	0.031	0.063	0.201	0.0271
GEOM. STD. DEV.	:	2.905	2.756	2.814	2.953	2.753	3.116	3.6550
1ST QUARTILE	•	0.060	0.050	0.010	0.015	0.020	0.104	0.0153
2ND QUARTILE	:	0.140	0.115	0.025	0.030	0.042	0.244	0.0339
3RD QUARTILE	•	0.295	0.225	0.045	0.055	0.075	0.450	0.0631

0.030

0.030

0.052

0.269

0.0372

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

#### STATION NAME : SOUTHWESTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT	:	JAN 6,83	TO DEC 29,83				PAGE: 1	
<u></u>		PRECIP.	CONDUCT.	PH FIELD	PH Lab	TOTAL H+ TO PH8.3 Mg/L	SULPHATE Mg/L	NITRATE AS N MG/L
# OF SAMPLES		477.0	291.0	210.00	345.00	396.0000	380.00	383.000
MAXIHUM	ī	82.4	110.0	5.48	6.64	0.5580	10.00	2.100
MINIMUM	:	0.2	2.5	3.19	3.60	0.0088	0.10	0.000
RANGE	:	82.2	107.5	2.29	3.04	0.5492	9.90	2.100
ARITH. HEAN	:	8.5	28.2	4.17	4.42	0.0866	3.27	0.563
ARITH. STD. DEV	:	9.5	15.7	0.36	0.42	0.0685	1.92	0.443
GEOM. MEAN	:	4.6	24.1	4.16	4.40	0.0675	2.67	0.426
GEOM. STD. DEV.	:	3.3	1.8	1.09	1.09	2.0516	2.03	2.288
1ST QUARTILE	:	1.8	17.5	3.93	4.16	0.0419	1.80	0.280
2ND QUARTILE	:	4.9	25.3	4.18	4.34	0.0725	3.00	0.410
3RD QUARTILE		12.8	37.1	4.40	4.60	0.1055	4.20	0.705
VOL. WGT. MEAN	:	*****	25.6	*****	*****	0.0734	2.74	0.390

***** : INSUFFICIENT DATA OR NOT APPLICABLE NOTE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF PRECIPITATION CONCENTRATIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

### STATION NAME : SOUTHWESTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT	:	JAN 6,83	TO DEC 29,83				PAGE : 2	
		CALCIUM	CHLORIDE	MAGNESIM	POTASSIM	SODIUM	MUINOMMA	FREE H+
		MG/L	MG/L	MG/L	HG/L	HG/L	AS N MG/L	LAB MG/L
# OF SAMPLES		316.000	374.000	318.000	326.000	327.000	315.000	345.0000
HAXIHUH		1.520	1.050	0.455	0.300	0.710	1.600	0.2512
MINIHUM	:	0.000	0.000	0.000	0.000	0.000	0.000	0.0002
RANGE	:	1.520	1.050	0.455	0.300	0.710	1.600	0.2510
ARITH. MEAN	:	0.301	0.212	0.054	0.048	0.080	0.346	0.0530
ARITH. STD. DEV	:	0.281	0.173	0.057	0.041	0.087	0.262	0.0390
GEOM. MEAN	:	0.211	0.164	0.038	0.041	0.056	0.267	0.0383
GEOM. STD. DEV.	•	2.401	2.204	2.517	2.428	2.815	2.178	2.6588
1ST QUARTILE	:	0.110	0.090	0.020	0.020	0.030	0.157	0.0248
211D QUARTILE	•	0.200	0.170	0.035	0.040	0.055	0.264	0.0457
3RD QUARTILE		0.370	0.270	0.070	0.060	0.100	0.470	0.0692
VOL. WGT. MEAN	:	0.253	0.147	0.045	0.037	0.058	0.302	0.0433

### PART V

### SUMMARY STATISTICS OF WET DEPOSITION BY STATION

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### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

Total State

STATION	NAME	:	BALSAM	LAKE/DAILY/AEROCHEM	#06
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PERIOD OF REPORT	:	JAN 3, 83	TO DEC 30,83				PAGE: 1	
		PRECIP.	FREE H+ FIELD	FREE H+ LAB	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N	CALCIUM
		HM	NG/M**2	MG/M**2	NG/H××2	MG/M××2	MG/M××2	MG/N**2
# OF SAMPLES		134.0	67.0000	107.0000	110.0000	109.00	108.000	84.000
MUHIXAN	:	55.0	3.0430	3.0146	2.6510	99.83	17.822	11.685
HINIHUM	:	0.1	0.0292	0.0001	0.0043	0.66	0.000	0.265
RANGE	:	54.9	3.0137	3.0145	2.6467	99.17	17.822	11.420
ARITH. MEAN	:	7.1	0.5920	0.3472	0.5463	17.60	3.123	2.176
ARITH. STD. DEV		8.5	0.4769	0.4291	0.5370	19.58	3.183	2.464
GEOH. MEAN	:	3.5	0.4342	0.1569	0.3139	9.94	1.938	1.400
GEOM. STD. DEV.	:	3.9	2.4034	5.1461	3.4857	3.20	3.091	2.483
1ST QUARTILE	:	1.4	0.2784	0.0787	0.1854	4.59	1.114	0.728
2ND QUARTILE	:	4.2	0.4993	0.1995	0.3583	10.42	2.363	1.352
3RD QUARTILE	:	8.8	0.7315	0.4883	0.7604	20.72	3.828	2.522

#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BALSAM LAKE/DAILY/AEROCHEM

PERIO

IOD	) OF	REPORT	: .	JAN	3,	83	TO	DEC 30,83	PAGE :

		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N
		MG/M××2	MG/M××2	MG/M××2	MG/M××2	MG/M××2
# OF SAMPLES	:	107.000	83.000	86.000	86.000	86.000
HUMIXAH	:	5.500	2.685	1.650	2.475	16.512
MINIMUM	ŧ	0.060	0.000	0.000	0.000	0.000
RANGE		5.440	2.685	1.650	2.475	16.512
ARITH. MEAN	•	0.947	0.320	0.301	0.360	2.361
ARITH. STD. DEV	:	0.865	0.452	0.353	0.376	2.824
GEOM. MEAN		0.676	0.217	0.191	0.287	1.034
GEOM. STD. DEV.	:	2.350	2.861	2.891	2.218	5.629
1ST QUARTILE		0.428	0.081	0.097	0.160	0.633
2ND QUARTILE	:	0.643	0.175	0.190	0.245	1.558
3RD QUARTILE	:	1.185	0.343	0.315	0.405	3.062

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CHARLESTON LAKE/DAILY/AEROCHEM #11

PERIOD OF REPORT	1	JAN 5, 83	TO DEC 29,83				PAGE: 1	
		PRECIP.	FREE H+ FIELD	FREE H+ Lab	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N	CALCIUM
		MH	HG/H××2	MG/H××2	HG/H××2	MG/M××2	MG/M××2	HG/H××2
# OF SAMPLES	:	110.0	52.0000	84.0000	83.0000	85.00	85.000	76.000
MUMIXAM	:	43.3	3.9498	2.1150	2.7911	105.64	16.464	6.176
MUNINUM		0.1	0.0723	0.0015	0.0070	0.00	0.000	0.000
RANGE	:	43.2	3.8775	2.1135	2.7841	105.64	16.464	6.176
ARITH. MEAN	:	8.6	0.6715	0.3493	0.5948	17.74	3.120	1.254
ARITH. STD. DEV	•	8.3	0.7456	0.3960	0.5609	19.25	3.389	1.156
GEOM. MEAN	:	4.8	0.4260	0.1670	0.3663	10.45	1.877	0.858
GEOM. STD. DEV.	:	3.6	2.6189	4.4713	3.1503	2.96	2.940	2.754
1ST QUARTILE	1	2.1	0.2008	0.0790	0.2208	4.50	0.955	0.482
2ND QUARTILE	•	6.3	0.4276	0.1976	0.4093	11.89	1.794	0.903
3RD QUARTILE	:	12.1	0.7195	0.4696	0.7527	20.55	3.874	1.538

## -44-

## ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CHARLESTON LAKE/DAILY/AEROCHEM #11

PERIOD OF REPORT : JAN 5, 83 TO DEC 29,83 PAGE : 2

		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	MUINOMMA N SA
		MG/M**2	MG/M**2	MG/M××2	MG/M××2	MG/M××2
# OF SAMPLES	:	83.000	76.000	76.000	76.000	76.000
MUNIXAM	ŧ	3.897	0.869	0.944	2.499	12.264
HUNINIM	:	0.000	0.000	0.000	0.000	0.089
RANGE	:	3.897	0.869	0.944	2.499	12.175
ARITH. MEAN	:	0.831	0.191	0.200	0.433	2.184
ARITH. STD. DEV	;	0.825	0.169	0.202	0.446	2.582
GEOM. MEAN	:	0.621	0.169	0.153	0.364	1.205
GEOM. STD. DEV.	•	2.655	2.310	3.004	2.547	3.099
IST QUARTILE	•	0.232	0.088	0.045	0.124	0.576
2ND QUARTILE	:	0.538	0.136	0.123	0.310	1.233
3RD QUARTILE	:	1.130	0.252	0.343	0.594	2.940

#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : DORSET/DAILY/AEROCHEM

#08

PERIOD OF REPORT		JAN 1, 83	TO JAN 2,84				PAGE: 1	
	i e	PRECIP.	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/M**2	TOTAL H+ TO PH8.3 MG/M**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES	:	164.0	79.0000	122.0000	126.0000	119.00	119.000	97.000
MUMIXAM	:	44.2	2.6141	1.6094	4.9970	100.36	17.424	15.440
MINIMUM	:	0.0	0.0564	0.0007	0.0192	0.10	0.000	0.000
RANGE	:	44.2	2.5576	1.6087	4.9778	100.26	17.424	15.440
ARITH. MEAN	:	6.5	0.7124	0.3140	0.5688	16.76	3.089	1.698
ARITH. STD. DEV	:	7.8	0.5973	0.3197	0.6528	18.09	3.053	2.494
GEOH. MEAN	:	2.8	0.5138	0.1579	0.3276	9.59	1.862	0.915
GEOM. STD. DEV.	:	4.5	2.3256	4.4824	3.1414	3.12	3.241	3.138
1ST QUARTILE	:	0.9	0.3033	0.0689	0.1577	4.03	0.895	0.438
2ND QUARTILE	:	3.4	0.5238	0.2098	0.4148	8.38	2.227	0.803
3RD QUARTILE	:	9.1	0.9368	0.4429	0.7498	25.10	4.433	1.984

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

0.077

0.159

0.285

STATION NAME : DORSET/DAILY/AEROCHEM

0.483

0.807

1.320

1ST QUARTILE

2ND QUARTILE

3RD QUARTILE

#08

PERIOD OF REPORT	:	JAN 1, 83	TO JAN 2,84					PAGE :
		CHLORIDE	MAGNESIM	POTASSIM		SODIUM	AMMONIUM AS N	
		MG/M**2	MG/M××2	MG/M**2		MG/M××2	MG/M**2	
# OF SAMPLES	:	114.000	95.000	96.000		97.000	101.000	
MAXIMUM	:	4.246	2.509	1.728	٠	2.316	13.587	9 8
MINIHUM	:	0.000	0.000	0.000		0.000	0.000	
RANGE		4.246	2.509	1.728		2.316	13.587	
ARITH. MEAN	:	1.095	0.281	0.349		0.506	1.977	
ARITH. STD. DEV	:	0.880	0.400	0.354		0.467	2.323	
GEOM. HEAN	:	0.825	0.172	0.271		0.393	0.937	
GEOM. STD. DEV.	:	2.261	2.914	2.747		2.169	4.702	

0.115

0.235

0.436

0.208

0.318

0.588

0.326

2.754

#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : FERNBERG/DAILY/AEROCHEM

#16

PERIOD OF REPORT	r :	JAN 4, 83	TO DEC 14,83				PAGE : 1	
		PRECIP.	FREE H+ FIELD	FREE H+ LAB	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N	CALCIUM
		ММ	MG/M××2	MG/M××2	MG/H××2	MG/M**2	MG/M××2	MG/M××2
# OF SAMPLES	:	76.0	0.0000	61.0000	67.0000	67.00	66.000	56.000
MUHIXAM	:	90.6	*****	0.6325	1.5583	54.36	10.872	23.556
MINIHUM	:	0.1	*****	0.0008	0.0181	0.16	0.000	0.000
RANGE	•	90.5	******	0.6317	1.5402	54.20	10.872	23.556
ARITH. HEAN	•	11.0	*****	0.0874	0.3193	10.41	2.045	1.902
ARITH. STD. DEV		13.1	*****	0.1137	0.2780	10.44	1.942	3.353
GEOM. MEAN	•	5.7	*****	0.0356	0.2186	5.92	1.364	0.971
GEOM. STD. DEV.	:	4.0	*****	5.1871	2.6148	3.42	2.868	3.179
1ST QUARTILE	•	2.6	****	0.0170	0.1394	2.74	0.763	0.465
211D QUARTILE	:	7.5	*****	0.0460	0.2303	6.82	1.656	1.050
3RD QUARTILE	:	14.8	******	0.1173	0.3877	15.95	2.629	2.018

**** : INSUFFICIENT DATA

#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : FERNBERG/DAILY/AEROCHEM

#16

PERIOD OF REPORT : JAN 4, 83 TO DEC 14,83

		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N
		MG/M**2	MG/M××2	MG/M××2	MG/M××2	MG/H××2
# OF SAMPLES	:	63.000	57.000	57.000	55.000	53.000
MAXIHUM	1	5.796	3.624	4.830	5.555	27.180
MINIHUM		0.000	0.000	0.029	0.000	0.124
RANGE	:	5.796	3.624	4.801	5.555	27.056
ARITH. MEAN		0.806	0.290	0.607	0.538	3.444
ARITH. STD. DEV	•	1.088	0.510	0.864	0.940	4.333
GEOH. MEAN	*	0.611	0.168	0.313	0.266	1.944
GEOM. STD. DEV.	:	2.540	2.956	3.190	3.497	3.206
1ST QUARTILE	:	0.151	0.063	0.131	0.082	1.074
2ND QUARTILE	ı	0.416	0.152	0.304	0.256	2.043
3RD QUARTILE	:	0.891	0.291	0.671	0.582	4.456

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PAGE : 2

#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : FORBES TWSP/DAILY/AEROCHEM #13

PERIOD OF REPORT : JAN 15, 83 TO DEC 29,83 PAGE : 1

		PRECIP.	FREE H+ FIELD	FREE H+ LAB	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N	CALCIUM
		ММ	HG/H××2	MG/H××2	MG/H××2	MG/M**2	MG/M×*2	HG/M××2
# OF SAMPLES	:	106.0	0.0000	62.0000	66.0000	66.00	67.000	56.000
HUHIXAH		48.6	*****	0.7703	15.5852	72.90	8.060	8.990
HINIHUH	:	0.1	*****	0.0014	0.0141	0.00	0.000	0.000
RANGE	•	48.5	*****	0.7689	15.5710	72.90	8.060	8.990
ARITH. MEAN	:	6.5	*****	0.1318	0.7573	11.11	1.544	1.438
ARITH. STD. DEV	:	9.1	******	0.1781	2.6015	15.26	1.789	1.917
GEOM. MEAN	:	2.5	*****	0.0565	0.1885	5.41	0.882	0.705
GEOM. STD. DEV.	:	4.4	*****	4.1534	4.0098	3.26	3.283	3.685
1ST QUARTILE	:	0.8	*****	0.0231	0.0643	2.18	0.373	0.249
2ND QUARTILE	:	2.9	*****	0.0553	0.1532	4.35	0.736	0.828
3RD QUARTILE	:	7.4	******	0.1269	0.4903	13.97	2.220	1.755

**** : INSUFFICIENT DATA

ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : FORBES TWSP/DAILY/AEROCHEM

#13

PERIOD OF REPORT	: JAN 15, 83	TO DEC 29,83				PAGE : 2
	CHLORIDE	MAGNESIM	POTASSIM	SODIUM	MUINOMHA A 2A	

						AS N
		MG/M××2	MG/M**2	MG/M××2	MG/M××2	MG/M××2
# OF SAMPLES	:	66.000	56.000	57.000	56.000	59.000
MUNIXAM	:	3.960	1.550	2.028	2.028	14.580
MINIHUM	:	0.000	0.000	0.000	0.000	0.000
RANGE	:	3.960	1.550	2.028	2.028	14.580
ARITH. MEAN	:	0.376	0.210	0.337	0.302	2.295
ARITH. STD. DEV	:	0.701	0.305	0.428	0.438	3.367
GEOM. HEAN	:	0.366	0.144	0.178	0.167	1.038
GEOM. STD. DEV.	:	2.838	3.545	3.788	3.185	3.866
1ST QUARTILE	-1	0.000	0.036	0.068	0.059	0.372
2ND QUARTILE	:	0.168	0.096	0.165	0.122	0.955
3RD QUARTILE	:	0.411	0.237	0.470	0.347	2.762

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : GRAHAM LAKE/DAILY/AEROCHEM #12

PERIOD OF REPORT : JAN 6, 83 TO DEC 29,83

PERIOD OF REPORT		JAN 6, 85	10 DEC 29,83				PAGE: 1	
		PRECIP.	FREE H+ FIELD	FREE H+ Lab	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N	CALCIUM
		ММ	MG/M××2	MG/M××2	HG/H××2	MG/M**2	MG/M××2	MG/M**2
# OF SAMPLES	:	121.0	54.0000	82.0000	92.0000	90.00	90.000	75.000
MAXIHUM	:	36.1	3.1941	2.1784	2.8033	136.71	21.172	12.760
MINIMUM	•	0.3	0.0090	0.0010	0.0110	0.80	0.160	0.000
RANGE	:	35.8	3.1851	2.1774	2.7922	135.91	21.012	12.760
ARITH. MEAN	•	8.4	0.6321	0.3169	0.5474	20.21	3.344	1.758
ARITH. STD. DEV	:	8.1	0.7023	0.3982	0.6019	24.62	3.593	2.385
GEOM. MEAN	:	4.9	0.3538	0.1385	0.3099	11.35	2.009	1.016
GEOM. STD. DEV.	:	3.2	3.3023	4.8114	3.1849	3.01	2.899	2.752
1ST QUARTILE	:	1.8	0.1669	0.0656	0.1310	5.26	1.000	0.478
2ND QUARTILE	:	5.0	0.4046	0.1757	0.3563	11.28	1.866	0.915
3RD QUARTILE	:	12.2	0.7676	0.3677	0.7069	21.74	4.557	1.748

#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GRAHAM LAKE/DAILY/AEROCHEM #1

PERIOD OF REPORT	: JAN 6.83	TO	DEC 29.83	PAGE : 2

		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N
		MG/M**2	MG/M**2	MG/M**2	MG/M××2	MG/H××2
# OF SAMPLES	1	90.000	75.000	74.000	76.000	71.000
MAXIMUM	•	4.693	2.232	1.972	2.240	14.940
MINIMUM		0.000	0.000	0.000	0.000	0.004
RANGE		4.693	2.232	1.972	2.240	14.936
ARITH. MEAN		1.186	0.324	0.405	0.553	3.155
ARITH. STD. DEV	:	1.042	0.482	0.395	0.494	3.336
GEOH. MEAN	Ĭ.	0.830	0.182	0.287	0.450	1.775
GEOM. STD. DEV.	:	2.621	2.828	2.658	2.468	3.570
1ST QUARTILE	:	0.425	0.084	0.143	0.232	0.878
211D QUARTILE	:	0.900	0.146	0.275	0.401	1.794
3RD QUARTILE	:	1.576	0.291	0.498	0.740	4.543

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : LAC LA CROIX/DAILY/AEROCHEM #15

PERIOD OF REPORT	:	DEC 24, 82	TO DEC 15,83				PAGE: 1	
		PRECIP.	FREE H+ FIELD	FREE H+ Lab	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N	CALCIUM
		ММ	MG/M**2	MG/M**2	MG/H**2	MG/M**2	MG/M×*2	MG/M**2
# OF SAMPLES	:	64.0	0.0000	47.0000	49.0000	51.00	51.000	44.000
MAXIMUM	*	68.8	******	1.3723	2.3659	51.58	8.253	10.287
MUNIMUM	:	0.1	******	0.0002	0.0211	0.00	0.000	0.044
RANGE	:	68.7	*****	1.3721	2.3448	51.58	8.253	10.243
ARITH. MEAN	:	10.1	******	0.1600	0.4045	10.56	2.019	1.382
ARITH. STD. DEV		12.3	******	0.2364	0.4113	10.59	1.939	1.847
GEOM. MEAN	:	5.0	******	0.0618	0.2512	5.70	1.184	0.648
GEOM. STD. DEV.	:	3.7	******	5.5248	2.9248	3.52	3.620	3.822
1ST QUARTILE	:	1.6	******	0.0256	0.1206	2.18	0.427	0.203
2ND QUARTILE	ï	5.9	******	0.0778	0.2714	6.70	1.138	0.894
3RD QUARTILE		13.0	******	0.2097	0.5530	15.50	2.981	2.011

**** : INSUFFICIENT DATA

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LAC LA CROIX/DAILY/AEROCHEM #15

PERIOD OF REPORT : DEC 24, 82 TO DEC 15,83

		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N
9		MG/M××2	MG/M**2	MG/M××2	MG/M××2	MG/M××2
# OF SAMPLES	:	51.000	45.000	44.000	43.000	46.000
MAXIMUM	•	2.376	1.905	2.321	2.954	11.963
HINIHUH	•	0.000	0.008	0.000	0.000	0.019
RANGE	*	2.376	1.897	2.321	2.954	11.945
ARITH. MEAN	:	0.522	0.224	0.385	0.392	2.284
ARITH. STD. DEV	:	0.598	0.324	0.502	0.627	2.554
GEOM. MEAN	:	0.453	0.120	0.223	0.222	0.913
GEOM. STD. DEV.	:	2.527	3.057	3.323	3.176	5.734
1ST QUARTILE	:	0.103	0.059	0.086	0.067	0.269
211D QUARTILE	:	0.289	0.097	0.171	0.136	1.367
3RD QUARTILE	:	0.761	0.245	0.400	0.381	3.306

2.936

5.648

2.200

3.672

#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

#02

STATION NAME : LONGWOODS/DAILY/AEROCHEM PAGE : 1 PERIOD OF REPORT : JAN 6, 83 TO DEC 22,83 FREE H+ TOTAL H+ SULPHATE NITRATE CALCIUM PRECIP. FREE H+ FIELD LAB TO PH8.3 AS N HG/H××2 MG/N**2 MG/M××2 MG/M××2 MM MG/H**2 MG/M**2 73.000 47.0000 83.0000 95.0000 89.00 88.000 # OF SAMPLES 117.0 17.000 MUNIXAM 3.7110 2.4518 3.5752 185.00 15.800 : 43.6 0.0106 1.05 0.062 0.039 HUHIHIH 0.2 0.0973 0.0005 183.95 16.938 15.761 RANGE 43.4 3.6137 2.4513 3.5646 3.087 8.1 1.0962 0.4919 0.7098 30.45 4.044 ARITH. MEAN 2.965 0.7198 31.40 3.364 ARITH. STD. DEV : 0.8231 0.5074 8.6 2.138 0.8028 0.2573 0.3772 18.96 2.694 GEOM. MEAN 4.2 2.3495 4.0620 3.7921 2.88 2.910 2.507 GEOM. STD. DEV. : 3.5 1.753 1.290 0.4234 0.1272 0.1949 10.39 1ST QUARTILE 1.4

0.2907

0.7867

0.4111

1.0708

21.24

39.11

NOIE(1): PRECIP. VALUES REPRESENT GAUGE DEPTH

4.6

11.2

0.9634

1.4863

2ND QUARTILE

3RD QUARTILE

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## ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LONGWOODS/DAILY/AEROCHEM

202

PERIOD OF REPORT : JAN 6, 83 TO DEC 22,83

		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N
		MG/M**2	MG/11×*2	MG/M××2	MG/M××2	MG/H**2
# OF SAMPLES	:	87.000	76.000	79.000	78.000	77.000
MUNIXAM	1	6.480	2.912	2.000	4.864	30.800
MINIHUM	:	0.080	0.052	0.000	0.000	0.026
RANGE	:	6.400	2.860	2.000	4.864	30.774
ARITH. MEAN		1.634	0.569	0.449	0.643	3.747
ARITH. STD. DEV	:	1.430	0.597	0.403	0.794	4.646
GEOM. MEAN	•	1.144	0.384	0.322	0.388	2.249
GEOM. STD. DEV.	:	2.443	2.391	2.404	2.819	2.921
1ST QUARTILE		0.605	0.226	0.165	0.195	1.182
2ND QUARTILE	:	1.253	0.341	0.307	0.375	2.237
3RD QUARTILE	:	2.172	0.668	0.609	0.749	4.138

## ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : ME'BOURNE/DAILY/AEROCHEM #01

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PERIOD OF REPORT	**)	JAN 6, 83	TO DEC 28,83				PAGE: 1	
		PRECIP.	FREE H+ FIELD	FREE H+ LAB	TOTAL H+	SULPHATE	NITRATE AS N	CALCIUM
		ММ	HG/H××2	MG/H**2	NG/H××2	MG/M**2	MG/M××2	MG/M**2
# OF SAMPLES	:	105.0	47.0000	80.0000	90.0000	86.00	88.000	74.000
HAXIMUM		58.4	14.5845	2.2717	13.9098	150.96	32.190	26.180
MINIMUM	:	0.3	0.0584	0.0056	0.0152	0.36	0.030	0.144
RANGE	:	58.0	14.5262	2.2661	13.8946	150.60	32.160	26.036
ARITH. MEAN	:	9.4	1.3294	0.5488	0.9543	33.56	4.926	3.718
ARITH. STD. DEV	:	10.0	2.2212	0.4957	1.5585	31.73	4.734	4.990
GEOM. MEAN	:	5.2	0.7565	0.3380	0.5284	21.17	3.317	2.090
GEOM. STD. DEV.	:	3.3	2.7227	3.0902	3.0737	2.88	2.728	2.828
1ST QUARTILE	1	2.2	0.3831	0.1697	0.2467	9.18	1.962	1.000
211D QUARTILE	:	5.2	0.6613	0.3449	0.5421	19.99	3.285	1.899
3RD QUARTILE	:	12.9	1.3781	0.8920	1.2911	51.88	6.354	3.314

PAGE : 2

#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MELBOURNE/DAILY/AEROCHEM

PERIOD OF REPORT : JAN 6, 83 TO DEC 28,83

#01

		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N
		MG/M××2	NG/M**2	MG/M××2	MG/M××2	MG/M**2
# OF SAMPLES	1	88.000	76.000	77.000	78.000	77.000
MUHIXAM	•	9.312	5.049	2.057	3.984	20.570
MINIMUM	•	0.000	0.012	0.000	0.000	0.122
RANGE	:	9.312	5.037	2.057	3.984	20.448
ARITH. MEAN	:	1.796	0.633	0.517	0.758	3.720
ARITH. STD. DEV	:	1.650	0.908	0.481	0.762	4.045
GEOM. HEAN	:	1.251	0.322	0.356	0.512	2.279
GEOM. STD. DEV.	:	2.484	3.163	2.555	2.774	2.828
1ST QUARTILE		0.809	0.152	0.179	0.237	1.138
2ND QUARTILE		1.173	0.324	0.321	0.442	2.396
3RD QUARTILE		2.226	0.612	0.669	1.091	4.754

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME	:	NITHGROVE/DAILY/AEROCHEM	#07

PERIOD OF REPORT	r :	JAN 4, 83	TO DEC 30,83				PAGE: 1	
		PRECIP.	FREE H+ FIELD	FREE H+	TOTAL H+ TO PII8.3	SULPHATE	NITRATE AS N	CALCIUM
		rin	MG/11**2	MG/M**2	MG/M××2	MG/M××2	MG/M××2	MG/M××2
# OF SAMPLES	. !	128.0	61.0000	97.0000	106.0000	104.00	104.000	86.000
HUHIXAH	:	311.9	2.4064	2.1483	2.7768	123.24	17.978	11.868
MINIHUM	:	0.2	0.0544	0.0000	0.0078	0.32	0.000	0.204
RANGE	:	311.7	2.3520	2.1483	2.7690	122.92	17.978	11.664
ARITH. MEAN	:	10.2	0.7363	0.3358	0.5330	17.36	3.044	1.872
ARITH. STD. DEV	:	27.8	0.5980	0.3847	0.5299	19.20	2.997	2.175
GEOM. MEAN		5.0	0.5371	0.1357	0.3205	9.84	1.826	1.199
GEOH. STD. DEV.	:	3.2	2.2985	6.5868	3.0654	3.18	3.284	2.502
1ST QUARTILE	:	2.4	0.3321	0.0723	0.1669	4.45	0.904	0.602
2HD QUARTILE	:	5.7	0.5357	0.2379	0.3808	9.29	2.093	1.159
3RD QUARTILE	:	11.7	0.9998	0.3977	0.7076	26.06	4.330	2.291

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : NITHGROVE/DAILY/AEROCHEM

#07

PERIOD OF REPORT : JAN 4, 83 TO DEC 30,83 PAGE : 2

		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N
		MG/M××2	MG/H××2	MG/M××2	MG/M××2	MG/M××2
# OF SAMPLES	:	99.000	86.000	82.000	85.000	88.000
MUNIXAM	:	4.646	1.984	2.150	1.870	11.610
MINIHUM	ï	0.019	0.000	0.073	0.000	0.000
RANGE	:	4.627	1.984	2.076	1.870	11.610
ARITH. MEAN	:	1.100	0.301	0.447	0.476	2.443
ARITH. STD. DEV	:	0.847	0.354	0.309	0.406	2.376
GEOM. MEAN	:	0.827	0.228	0.366	0.374	1.433
GEOM. STD. DEV.	:	2.338	2.330	1.912	2.113	3.336
1ST QUARTILE	:	0.519	0.103	0.236	0.205	0.614
2ND QUARTILE	:	0.910	0.188	0.408	0.334	1.590
3RD QUARTILE	:	1.306	0.363	0.522	0.576	3.550

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH EASTHOPE/DAILY/AEROCHEM #03

PERIOD OF REPOR	т :	JAN 6, 83	TO DEC 26,83				PAGE: 1	
		PRECIP.	FREE H+	FREE H+	TOTAL H+	SULPHATE	NITRATE	CALCIUM
		MM	FIELD MG/M**2	LAB MG/M**2	TO PH8.3 MG/M**2	MG/M××2	AS N MG/M**2	MG/M**2
# OF SAMPLES	:	130.0	57.0000	82.0000	104.0000	99.00	102.000	80.000
MUNIXAM		82.4	3.4350	2.8571	4.5485	206.00	19.776	21.424
NUNININ	:	0.2	0.0119	0.0016	0.0109	0.36	0.000	0.156
RANGE	:	82.2	3.4231	2.8555	4.5376	205.64	19.776	21.268
ARITH. MEAN	:	8.3	0.9598	0.4016	0.5713	25.67	3.516	2.606
ARITH. STD. DEV	:	10.4	0.8755	0.4484	0.6500	28.03	3.112	3.245
GEON. MEAN	•	4.3	0.6091	0.2107	0.3140	15.94	2.404	1.507
GEOM. STD. DEV.	:	3.5	2.9931	4.1237	3.4174	2.95	2.764	2.878
1ST QUARTILE	:	1.7	0.3958	0.1264	0.1508	9.18	1.605	0.742
2ND QUARTILE	:	4.6	0.6236	0.2635	0.3363	16.00	2.585	1.407
3RD QUARTILE	:	11.0	1.2196	0.4895	0.7506	33.54	4.634	3.583

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STATION NAME : NORTH EASTHOPE/DAILY/AEROCHEM #03

PERIOD OF REPORT : JAN 6, 83 TO DEC 26,83

		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N
		MG/M**2	MG/M××2	MG/M××2	MG/M××2	MG/M××2
# OF SAMPLES	:	94.000	78.000	79.000	80.000	78.000
MAXIMUM	:	9.064	4.120	2.472	3.708	19.446
MUNINUM	:	0.096	0.034	0.015	0.000	0.000
RANGE	:	8.968	4.086	2.457	3.708	19.446
ARITH. MEAN	:	1.473	0.466	0.510	0.741	3.501
ARITH. STD. DEV	:	1.441	0.606	0.476	0.784	3.641
GEON. HEAN	:	1.039	0.274	0.352	0.484	2.190
GEOM. STD. DEV.		2.327	2.783	2.479	2.663	2.866
1ST QUARTILE	:	0.595	0.134	0.198	0.255	1.123
2ND QUARTILE		0.988	0.259	0.362	0.516	2.184
3RD QUARTILE		1.833	0.518	0.642	0.803	3.821

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAILTON/DAILY/AEROCHEM

#10

PERIOD OF REPORT		JAN 6, 83	TO DEC 29,83				PAGE: 1	
		PRECIP.	FREE H+ FIELD	FREE H+ Lab	TOTAL H+ TO PII8.3	SULPHATE	NITRATE AS N	CALCIUM
		HH	MG/M××2	MG/H××2	NG/M××2	MG/M**2	MG/M××2	MG/M**2
# OF SAMPLES	•	82.0	44.0000	59.0000	59.0000	62.00	62.000	56.000
HUHIXAM	:	80.7	2.4217	1.8848	2.7396	131.40	16.020	35.599
MINIMUM	:	0.2	0.0055	0.0020	0.0115	0.72	0.072	0.138
RANGE	:	80.5	2.4162	1.8829	2.7281	130.68	15.948	35.461
ARITH. MEAN	:	11.3	0.8042	0.4933	0.8340	30.53	4.724	3.259
ARITH. STD. DEV	:	12.5	0.6912	0.4600	0.6783	29.80	4.089	5.271
GEOM. MEAN	:	6.3	0.5060	0.2553	0.5488	18.43	3.038	1.803
GEOM. STD. DEV.	:	3.5	3.1854	4.3892	2.9132	3.08	2.892	2.818
1ST QUARTILE	:	2.4	0.2795	0.1164	0.2553	9.76	1.536	0.920
2ND QUARTILE	:	7.8	0.5380	0.3434	0.6228	20.87	3.063	1.776
3RD QUARTILE	:	16.2	1.2801	0.7831	1.2049	41.76	6.644	2.918

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0.414

STATION NAME : RAILTON/DAILY/AEROCHEM

2.131

3RD QUARTILE

#10

PERIOD OF REPORT		JAN 6, 83	TO DEC 29,83		a		PAGE : 2
		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N	
		MG/M**2	MG/M**2	MG/M**2	MG/M××2	MG/M**2	
# OF SAMPLES	:	61.000	56.000	56.000	56.000	56.000	
MUNIXAM	:	27.525	11.744	2.047	19.451	30.094	
MINIHUM	:	0.049	0.000	0.000	0.000	0.236	
RANGE	:	27.475	11.744	2.047	19.451	29.858	
ARITH. MEAN	:	1.860	0.547	0.440	0.960	4.247	
ARITH. STD. DEV	:	3.605	1.570	0.475	2.638	5.079	
GEOM. MEAN	1	0.954	0.258	0.267	0.455	2.496	
GEOM. STD. DEV.	:	3.074	2.931	3.125	3.451	2.921	
1ST QUARTILE	:	0.428	0.119	0.134	0.152	1.299	
2ND QUARTILE	•	0.796	0.222	0.247	0.303	2.407	*

0.605

0.827

5.683

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAVEN LAKE/DAILY/AER	ROCHEM #05	
PERIOD OF REPORT : JAN 3, 83 TO	DEC 29,83	PAGE :

		Manager Street, Samuel		-				
		PRECIP.	FREE H+ FIELD	FREE H+ LAB	TOTAL H+ TO PH8.3	SULPHATE	NITRATE As N	CALCIUM
		ММ	MG/M**2	MG/M××2	HG/H××2	MG/M××2	MG/M××2	HG/M××2
# OF SAMPLES	:	144.0	73.0000	116.0000	123.0000	124.00	123.000	99.000
MUNIXAM	:	29.4	2.8845	1.3663	8.5840	91.91	19.474	14.210
MINIMUM	:	0.2	0.0401	0.0005	0.0076	0.09	0.048	0.034
RANGE	•	29.2	2.8444	1.3658	8.5764	91.81	19.425	14.175
ARITH. MEAN	:	6.4	0.6949	0.2983	0.5323	16.59	3.103	2.194
ARITH. STD. DEV	•	6.6	0.5011	0.2954	0.8544	17.75	3.121	2.653
GEOM. MEAN	į	3.5	0.5344	0.1493	0.2688	8.56	1.733	1.171
GEOM. STD. DEV.	:	3.4	2.1986	4.3943	3.6309	3.74	3.590	3.335
1ST QUARTILE	:	1.4	0.3363	0.0646	0.1128	3.51	0.952	0.566
2ND QUARTILE	:	3.9	0.6022	0.2011	0.3214	9.92	2.142	1.141
3RD QUARTILE	:	9.2	0.9358	0.4680	0.7302	24.57	4.244	2.837

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMHARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAVEN LAKE/DAILY/AEROCHEM

3RD QUARTILE : 1.400

#05

PERIOD OF REPORT	:	JAN 3, 83	TO DEC 29,83				PA
		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N	
		MG/M**2	MG/M××2	MG/M××2	MG/M××2	MG/H××2	
# OF SAMPLES	:	122.000	99.000	99.000	97.000	101.000	
MUNIXAM	:	5.211	2.680	2.702	2.940	17.472	
HINIMUM ·	:	0.000	0.000	0.000	0.042	0.000	
RANGE	:	5.211	2.680	2.702	2.898	17.472	
ARITH. MEAN	•	1.014	0.301	0.321	0.473	2.339	
ARITH. STD. DEV	:	0.967	0.435	0.430	0.502	2.744	
GEOM. MEAN	•	0.708	0.195	0.197	0.316	1.140	
GEOM. STD. DEV.	:	2.518	2.841	3.079	2.455	4.697	
1ST QUARTILE	:	0.381	0.072	0.091	0.179	0.454	
2ND QUARTILE	:	0.684	0.136	0.208	0.310	1.395	
					8		

0.369

0.533

3.189

0.379

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : QUETICO CENTRE/DAILY/AEROCHEM #14

PERIOD OF REPORT	:	FEB 20, 83	TO DEC 22,83				PAGE: 1	
		PRECIP.	FREE H+ FIELD	FREE H+ LAB	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N	CALCIUM
		MM	MG/M**2	MG/M××2	MG/M**2	MG/M**2	MG/M××2	MG/M××2
# OF SAMPLES	:	92.0	0.0000	53.0000	59.0000	59.00	59.000	52.000
HUHIXAH	:	62.2	******	0.8924	1.4645	55.66	7.843	12.198
MINIMUM		0.1	*****	0.0003	0.0157	0.00	0.000	0.070
RATIGE	:	62.1	*****	0.8920	1.4488	55.66	7.843	12.128
ARITH. MEAN	:	8.7	****	0.1204	0.3255	10.52	1.630	1.623
ARITH. STD. DEV	:	10.9	*****	0.1523	0.2987	12.71	1.777	2.493
GEOM. MEAN	:	3.9	*****	0.0476	0.2101	5.40	1.010	0.756
GEOM. STD. DEV.	:	4.3	****	5.6679	2.7570	3.30	3.151	3.425
1ST QUARTILE	:	1.3	*****	0.0157	0.1071	2.42	0.364	0.317
2ND QUARTILE	:	4.7	******	0.0594	0.2242	5.43	0.991	0.819
3RD QUARTILE	:	12.0	******	0.1634	0.4600	13.27	2.164	1.383

**** : INSUFFICIENT DATA

STATION NAME : QUETICO CENTRE/DAILY/AEROCHEM #14

PERIOD OF REPORT : FEB 20, 83 TO DEC 22,83 PAGE : 2

		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM As N
		MG/M××2	HG/H××2	MG/M××2	HG/M××2	MG/M××2
# OF SAMPLES	1	55.000	52.000	51.000	50.000	57.000
HUMIXAM	:	3.795	1.771	1.785	3.036	10.914
HUHIHIH	•	0.000	0.000	0.000	0.000	0.000
RANGE	:	3.795	1.771	1.785	3.036	10.914
ARITH. MEAN	•	0.464	0.242	0.378	0.324	2.116
ARITH. STD. DEV	:	0.706	0.402	0.409	0.507	2.543
GEOM. HEAN	:	0.463	0.195	0.278	0.241	1.084
GEOM. STD. DEV.	:	2.773	2.991	2.852	2.635	3.805
1ST QUARTILE	•	0.000	0.029	0.085	0.075	0.465
2ND QUARTILE	•	0.195	0.150	0.218	0.183	1.074
3RD QUARTILE		0.563	0.222	0.541	0.310	2.609

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WELLESLEY/DAILY/AEROCHEM

#04

PERIOD OF REPORT	:	JAN 6, 83	TO DEC 29,83				PAGE: 1	
		PRECIP.	FREE H+ FIELD MG/M**2	FREE H+ LAB MG/H**2	TOTAL H+ TO PH8.3 MG/N**2	SULPHATE MG/M**2	NITRATE AS N MG/M**2	CALCIUM MG/M**2
# OF SAMPLES	:	125.0	59.0000	100.0000	107.0000	106.00	105.000	89.000
MUNIXAH	:	51.9	5.2948	1.7186	4.5336	151.70	16.650	23.108
HINIHUM	:	0.3	0.0754	0.0007	0.0260	0.45	0.000	0.000
RANGE	:	51.6	5.2194	1.7179	4.5076	151.25	16.650	23.108
ARITH. MEAN	•	8.5	1.2573	0.3795	0.6411	22.05	3.339	2.336
ARITH. STD. DEV	:	8.9	1.3444	0.3658	0.6659	22.33	2.650	3.390
GEOM. MEAN	:	4.8	0.7353	0.2149	0.3942	13.93	2.461	1.284
GEOM. STD. DEV.	:	3.2	2.9768	3.8270	2.9448	2.82	2.318	3.066
1ST QUARTILE	:	2.1	0.3682	0.1206	0.2012	6.65	1.317	0.532
2ND QUARTILE		5.4	0.7473	0.2619	0.4219	14.66	2.694	1.290
3RD QUARTILE	:	12.8	1.5981	0.5044	0.8911	32.42	4.577	2.704

# SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

ONTARIO MINISTRY OF THE ENVIRONMENT

STATION NAME : WELLESLEY/DAILY/AEROCHEM

#04

PERIOD OF REPORT : JAN 6, 83 TO DEC 29,83 PAGE : 2

		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N
		MG/M××2	MG/M**2	MG/M××2	MG/M××2	MG/H××2
# OF SAMPLES	:	105.000	88.000	91.000	91.000	83.000
HUHIXAH	:	6.290	3.922	1.568	2.800	14.430
MUNINUM	1	0.000	0.000	0.000	0.000	0.000
RANGE	:	6.290	3.922	1.568	2.800	14.430
ARITH. MEAN	:	1.127	0.403	0.230	0.470	3.040
ARITH. STD. DEV		1.063	0.589	0.284	0.543	2.682
GEOM. MEAN	•	0.822	0.232	0.190	0.279	1.949
GEOM. STD. DEV.	•	2.383	3.307	2.972	3.500	3.018
1ST QUARTILE	:	0.393	0.083	0.038	0.088	1.024
211D QUARTILE	:	0.801	0.222	0.136	0.277	2.323
3RD QUARTILE		1.518	0.457	0.300	0.634	4.023

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STATION NAME : WHITMAN CREEK/DAILY/AEROCHEM #09

PERIOD OF REPORT	:	JAN 7, 83	TO DEC 23,83				PAGE: 1	
		PRECIP.	FREE H+ FIELD	FREE H+ LAB	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N	CALCIUM MG/M**2
		MM	MG/M××2	MG/M××2	MG/H**2	MG/M××2	MG/M**2	nG/n××2
# OF SAMPLES	:	85.0	34.0000	62.0000	64.0000	62.00	64.000	53.000
MAXIMUM	:	40.5	2.6715	2.3810	3.8381	156.45	15.249	12.584
HUHIHIH	:	0.9	0.0470	0.0002	0.0206	0.95	0.240	0.054
RANGE	•	39.6	2.6245	2.3809	3.8175	155.51	15.009	12.530
ARITH. MEAN	•	9.0	0.8647	0.4339	0.6426	28.07	3.854	2.276
ARITH. STD. DEV	:	7.9	0.7535	0.4618	0.6622	30.64	3.681	2.240
GEOM. MEAN	:	5.9	0.5764	0.2085	0.3793	16.31	2.533	1.527
GEOM. STD. DEV.	:	2.7	2.6541	5.4522	3.1631	2.99	2.613	2.618
1ST QUARTILE	1	2.4	0.3600	0.0995	0.2235	7.55	1.446	0.771
2ND QUARTILE	:	6.8	0.4739	0.2591	0.4193	14.96	2.484	1.666
3RD QUARTILE	:	13.4	1.3074	0.5765	0.8729	40.99	4.913	2.803

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PAGE : 2

#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

0.297

0.484

0.272

0.780

1.756

4.507

#### STATION NAME : WHITMAN CREEK/DAILY/AEROCHEM #09

0.745

1.740

2ND QUARTILE

3RD QUARTILE

PERIOD OF REPORT		JAN 7, 83 1	O DEC 23,83				
		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N	
		MG/M××2	MG/M**2	MG/M××2	MG/M**2	MG/M××2	
# OF SAMPLES	:	64.000	51.000	54.000	54.000	54.000	
MAXIMUM	:	8.892	2.024	1.290	2.436	16.000	
HINIMUM	•	0.000	0.000	0.018	0.000	0.011	
RANGE	:	8.892	2.024	1.272	2.436	15.989	
ARITH. MEAN		1.244	0.369	0.391	0.487	3.318	
ARITH. STD. DEV	:	1.429	0.410	0.315	0.511	3.595	
GEOH. MEAN	:	0.834	0.244	0.283	0.391	1.768	
GEOM. STD. DEV.	:	2.772	2.785	2.369	2.671	3.813	
1ST QUARTILE	:	0.345	0.129	0.160	0.102	0.868	

0.245

0.479

### PART VI

### SUMMARY STATISTICS OF WET DEPOSITION BY REGION

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## ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

#### STATION NAME : CENTRAL REGION/DAILY PRECIPITATION

PERIOD OF REPORT	r :	JAN 1, 83	TO JAN 2,84				PAGE: 1	
		PRECIP.	FREE H+ FIELD	FREE H+ Lab	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N	CALCIUM
		MM	MG/M××2	MG/M××2	MG/M**2	MG/M**2	MG/M××2	MG/M×*2
# OF SAMPLES	•	570.0	280.0000	442.0000	465.0000	456.00	454.000	366.000
MUMIXAM	•	311.9	3.0430	3.0146	8.5840	123.24	19.474	15.440
MINIMUM	:	0.0	0.0292	0.0000	0.0043	0.09	0.000	0.000
RANGE	•	311.9	3.0137	3.0146	8.5797	123.14	19.474	15.440
ARITH. MEAN		7.4	0.6842	0.3227	0.5456	17.05	3.091	1.983
ARITH. STD. DEV	:	14.8	0.5460	0.3573	0.6620	18.56	3.080	2.460
GEOH. MEAN	:	3.6	0.5034	0.1503	0.3063	9.43	1.835	1.149
GEOM. STD. DEV.	•	3.8	2.3050	5.0320	3.3293	3.31	3.299	2.910
1ST QUARTILE	•	1.6	0.3127	0.0729	0.1592	4.33	0.955	0.556
2ND QUARTILE	:	4.3	0.5479	0.2128	0.3807	9.97	2.248	1.097
3RD QUARTILE	:	9.8	0.9150	0.4494	0.7259	24.42	4.200	2.382

#### STATION NAME : CENTRAL REGION/DAILY PRECIPITATION

PERIOD OF REPORT	· TAN	1 97	TA	1AM 2 AA	PAGE :
PERIOD OF REPORT	· JAN	1, 03	10	JAN 6,04	PAGE ·

		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N
		MG/M××2	MG/M××2	MG/H××2	MG/M××2	MG/M××2
# OF SAMPLES	:	442.000	363.000	363.000	365.000	376.000
HAXIHUH	:	5.500	2.685	2.702	2.940	17.472
MINIMUM	:	0.000	0.000	0.000	0.000	0.000
RANGE	:	5.500	2.685	2.702	2.940	17.472
ARITH. MEAN	:	1.038	0.300	0.352	0.456	2.271
ARITH. STD. DEV	:	0.894	0.411	0.369	0.445	2.569
GEOM. MEAN	ï	0.754	0.201	0.245	0.341	1.116
GEOM. STD. DEV.	:	2.375	2.745	2.772	2.260	4.579
1ST QUARTILE	:	0.446	0.086	0.114	0.184	0.485
2ND QUARTILE	į	0.780	0.160	0.244	0.306	1.410
3RD QUARTILE	:	1.312	0.353	0.449	0.550	3.201

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

#### STATION NAME : NORTHWESTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT	F : DEC 24, 82	TO JAN 2,84		₽		PAGE : 1	
ł	PRECIP.	FREE H+ FIELD	FREE H+ LAB	TOTAL H+	SULPHATE	NITRATE AS N	CALCIUM
	нм	MG/M**2	MG/H××2	MG/M**2	MG/M**2	MG/M××2	MG/M××2
# OF SAMPLES	338.0	0.0000	223.0000	241.0000	243.00	243.000	208.000
MUMIXAM	90.6	****	1.3723	15.5852	72.90	10.872	23.556
HINIHUH	0.1	******	0.0002	0.0141	0.00	0.000	0.000
RANGE	90.5	******	1.3721	15.5710	72.90	10.872	23.556
ARITH. MEAN	8.8	******	0.1229	0.4581	10.66	1.800	1.597
ARITH. STD. DEV	: 11.3	******	0.1729	1.3945	12.42	1.863	2.499
GEOM. MEAN	3.9	*****	0.0488	0.2139	5.61	1.092	0.768
GEOM. STD. DEV.	: 4.3	******	5.0852	3.0796	3.34	3.226	3.511
1ST QUARTILE	: 1.5	******	0.0210	0.1121	2.53	0.440	0.303
2ND QUARTILE	4.8	*****	0.0552	0.2192	5.60	1.066	0.838
3RD QUARTILE	: 11.6	*****	0.1612	0.4825	15.37	2.622	1.851

**** : INSUFFICIENT DATA

STATION NAME : NORTHWESTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT : DEC 24, 82 TO JAN 2,84 PAGE : 2

		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N
		MG/M**2	MG/M**2	MG/H××2	MG/M××2	MG/M××2
# OF SAMPLES		235.000	210.000	209.000	204.000	215.000
MUNIXAN	:	5.796	3.624	4.830	5.555	27.180
MINIMUM	:	0.000	0.000	0.000	0.000	0.000
RANGE	:	5.796	3.624	4.830	5.555	27.180
ARITH. MEAN	:	0.544	0.243	0.431	0.390	2.528
ARITH. STD. DEV	:	0.818	0.396	0.595	0.663	3.314
GEOH. MEAN	:	0.465	0.156	0.243	0.220	1.192
GEOM. STD. DEV.	:	2.734	3.125	3.343	3.145	4.136
1ST QUARTILE	:	0.067	0.052	0.093	0.072	0.531
2ND QUARTILE	:	0.237	0.110	0.199	0.186	1.347
3RD QUARTILE	:	0.630	0.247	0.493	0.408	3.306

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

#### STATION NAME : SOUTHEASTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT	:	JAN 1, 83	TO JAN 2,84				PAGE: 1	
		PRECIP.	FREE H+ FIELD	FREE H+ LAB	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N	CALCIUM
		MM	MG/M××2	MG/M××2	MG/M××2	MG/M××2	MG/M××2	MG/M××2
# OF SAMPLES	•	398.0	184.0000	287.0000	298.0000	299.00	301.000	260.000
MUHIXAM	:	80.7	3.9498	2.3810	3.8381	156.45	21.172	35.599
MINIHUM	i	0.1	0.0055	0.0002	0.0070	0.00	0.000	0.000
RANGE	:	80.6	3.9443	2.3809	3.8311	156.45	21.172	35.599
ARITH. MEAN	:	9.2	0.7274	0.3879	0.6378	23.28	3.673	2.040
ARITH. STD. DEV	:	9.2	0.7217	0.4283	0.6256	26.21	3.694	3.075
GEOM. MEAN	:	5.3	0.4445	0.1813	0.3797	13.22	2.254	1.189
GEOM. STD. DEV.	:	3.2	2.9787	4.7964	3.1538	3.06	2.880	2.844
1ST QUARTILE	i	2.3	0.2409	0.0880	0.2162	6.39	1.105	0.607
2ND QUARTILE	:	6.3	0.4440	0.2281	0.4402	13.35	2.304	1.095
3RD QUARTILE	:	13.1	0.9266	0.5101	0.8250	28.16	4.925	2.514

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

#### STATION NAME : SOUTHEASTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT : JAN 1, 83 TO JAN 2,84 PAGE:	ERIOD OF	FREPORT	: JAN	1, 83	TO	JAN	2,84	PAGE :		2
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		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N
		MG/M××2	MG/M**2	MG/M××2	MG/M××2.	MG/M××2
# OF SAMPLES	:	298.000	258.000	260.000	262.000	257.000
MUNIXAM	1	27.525	11.744	2.047	19.451	30.094
MUNINIM	:	0.000	0.000	0.000	0.000	0.004
RANGE	:	27.525	11.744	2.047	19.451	30.090
ARITH. MEAN	:	1.238	0.342	0.350	0.592	3.140
ARITH. STD. DEV	:	1.923	0.807	0.365	1.299	3.709
GEOM. MEAN	:	0.788	0.204	0.234	0.412	1.704
GEOM. STD. DEV.	:	2.780	2.727	2.925	2.741	3.408
1ST QUARTILE	:	0.375	0.098	0.112	0.148	0.810
2ND QUARTILE	:	0.739	0.170	0.235	0.341	1.733
3RD QUARTILE	:	1.602	0.324	0.431	0.710	4.174

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#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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#### STATION NAME : SOUTHWESTERN REGION/DAILY PRECIPITATION

PERIOD OF REPORT	•	JAN 6, 83	TO DEC 29,83				PAGE : 1	
Ł		PRECIP.	FREE H+ FIELD	FREE H+ Lab	TOTAL H+ TO PH8.3	SULPHATE	NITRATE AS N	CALCIUM
		HH	NG/M××2	MG/M××2	MG/M**2	MG/M××2	MG/M××2	MG/M××2
# OF SAMPLES	:	477.0	210.0000	345.0000	396.0000	380.00	383.000	316.000
MUMIXAM	:	82.4	14.5845	2.8571	13.9098	206.00	32.190	26.180
MINIHUM	:	0.2	0.0119	0.0005	0.0106	0.36	0.000	0.000
RANGE	:	82.2	14.5726	2.8566	13.8992	205.64	32.190	26.180
ARITH. MEAN	:	8.5	1.1567	0.4510	0.7104	27.57	3.913	2.901
ARITH. STD. DEV	:	9.5	1.4011	0.4564	0.9590	28.56	3.540	3.729
GEOM. HEAN	:	4.6	0.7171	0.2481	0.3928	17.05	2.674	1.686
GEOM. STD. DEV.	:	3.3	2.7789	3.8060	3.3301	2.91	2.676	2.883
1ST QUARTILE	:	1.8	0.3831	0.1380	0.2060	9.03	1.636	0.875
2ND QUARTILE	:	4.9	0.7447	0.2938	0.4517	17.41	2.926	1.632
3RD QUARTILE	:	12.8	1.4028	0.6146	0.9683	37.87	5.113	3.411

### 4

#### ONTARIO MINISTRY OF THE ENVIRONMENT SUMMARY STATISTICS OF CALCULATED DEPOSITIONS APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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2.969

0.146

0.280

0.565

#### STATION NAME : SOUTHWESTERN REGION/DAILY PRECIPITATION

2.434

0.548

1.052

1.954

:

GEOM. STD. DEV. :

1ST QUARTILE

2ND QUARTILE

3RD QUARTILE

PERIOD OF REPORT	:	JAN 6, 83	TO DEC 29,83				PAGE : 2
3		CHLORIDE	MAGNESIM	POTASSIM	SODIUM	AMMONIUM AS N	
		MG/M××2	HG/H××2	MG/M**2	MG/M××2	MG/M**2	
# OF SAMPLES	:	374.000	318.000	326.000	327.000	315.000	
MUMIXAM	:	9.312	5.049	2.472	4.864	30.800	
HINIHUH	:	0.000	0.000	0.000	0.000	0.000	
RANGE	:	9.312	5.049	2.472	4.864	30.800	
ARITH. MEAN	:	1.490	0.513	0.419	0.646	3.493	
ARITH. STD. DEV	:	1.415	0.687	0.429	0.728	3.794	
GEOM. MEAN	:	1.040	0.295	0.291	0.399	2.159	

2.757

0.130

0.280

0.563

3.032

0.194

0.391

0.751

2.900

1.138

2.316

4.232

### PART VII

SUMMARY STATISTICS OF AIR CONCENTRATION BY STATION, REGION

STATION NAME : C	HAR	LESTON LAKE/DAI	LY/AIR	#11	24		
PERIOD OF REPORT		JAN 4,83 TO	JAN 1,84		*		PAGE : 1
		SULPHUR DIOXIDE UG/N**3	SULPHATE UG/M**3	NITRIC AS N UG/M**3	AMMONIUM AS N Ug/m**3	NITRATE AS N UG/M**3	TOTL NO3 AS N UG/M**3
# OF SAMPLES	:	302.0	302.00	302.00	282.000	301.00	301.00
HUHIXAN	:	36.7	27.02	1.67	5.552	1.48	2.09
HINIMUM	:	0.0	0.00	0.00	0.000	0.00	0.00
RANGE	:	36.7	27.02	1.67	5.552	1.48	2.09
ARITH. MEAN	:	5.3	3.74	0.33	0.850	0.18	0.50
ARITH. STD. DEV	:	5.8	4.37	0.34	1.008	0.25	0.45
GEOM. MEAN		3.0	2.26	0.19	0.469	0.15	0.32
GEOM. STD. DEV.	:	3.2	2.83	3.30	3.475	3.32	3.04
1ST QUARTILE	:	1.3	1.13	0.09	0.228	0.03	0.15
2ND QUARTILE	:	3.4	2.22	0.20	0.509	0.07	0.37
3RD QUARTILE	:	7.3	4.55	0.47	1.074	0.23	0.73

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STATION NAME : DORSET/DAILY/AIR #08

PERIOD OF REPORT	:	JAN 18,83 TO	) JAN 1,84				PAGE : 1
		SULPHUR DIOXIDE	SULPHATE	NITRIC AS N	AMMONIUM AS N	NITRATE AS N	TOTL NO3 AS N
		UG/H××3	UG/M**3	UG/M**3	UG/M**3	UG/M××3	UG/M**3
# OF SAMPLES	:	295.0	300.00	295.00	299.000	300.00	294.00
HUHIXAM	•	37.6	31.07	2.41	5.821	0.74	2.44
MINIMUM	:	0.0	0.00	0.00	0.000	0.00	0.00
RANGE	:	37.6	31.07	2.41	5.821	0.74	2.44
ARITH. MEAN	:	4.3	3.78	0.28	0.669	0.03	0.30
	:	4.8	5.03	0.33	0.983	0.08	0.35
GEOH. MEAN	:	2.2	2.03	0.15	0.290	0.22	0.17
GEOM. STD. DEV.	:	3.9	3.14	3.27	4.426	4.79	3.14
1ST QUARTILE	:	1.0	1.02	0.06	0.122	0.00	0.07
2ND QUARTILE	:	2.9	1.86	0.14	0.269	0.00	0.16
3RD QUARTILE	:	5.9	4.48	0.37	0.730	0.02	0.41

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STATION NAM	E :	FERNBERG/DAILY/AIR	
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#16

PERIOD OF REPORT		JAN 1,83	TO DEC 13,83				PAGE: 1
8		SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	NITRIC AS N UG/M**3	AMMONIUM AS N UG/M**3	NITRATE AS N UG/M**3	TOTL NO3 AS N UG/M**3
# OF SAMPLES	:	180.0	188.00	188.00	185.000	188.00	188.00
MUNIXAM	:	11.9	12.50	1.09	2.770	0.47	1.13
HINIHUH	:	0.0	0.00	0.00	0.000	0.00	0.00
RANGE	:	11.9	12.50	1.09	2.770	0.47	1.13
ARITH. MEAN	:	0.9	1.42	0.11	0.262	0.02	0.13
ARITH. STD. DEV	:	1,. 9	2.05	0.17	0.415	0.06	0.19
GEOM. MEAN	:	0.4	0.78	0.11	0.153	0.18	0.11
GEOM. STD. DEV.	:	4.8	3.51	3.43	3.663	4.71	3.34
1ST QUARTILE	:	0.1	0.22	0.02	0.042	0.00	0.02
2ND QUARTILE	:	0.3	0.80	0.05	0.111	0.00	0.06
3RD QUARTILE	:	1.0	1.65	0.11	0.276	0.03	0.15

83

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MULIAL	NAME	•	LUNGWUUDS/DAILY/AIR	

#02

PERIOD OF REPORT		JAN 1,83 TO	DEC 21,83				PAGE: 1
		SULPHUR DIOXIDE	SULPHATE	NITRIC AS N	AHMONIUM AS N	NITRATE AS N	TOTL NO3 AS N
		UG/M**3	UG/M**3	UG/M××3	.UG/M**3	UG/M**3	UG/M**3
# OF SAMPLES	:	334.0	336.00	337.00	299.000	336.00	336.00
MAXIMUM	•	60.3	40.07	2.61	8.936	1.96	2.89
HINIHUM	:	0.0	0.00	0.00	0.000	0.00	0.00
RANGE	:	60.3	40.07	2.61	8.936	1.96	2.88
ARITH. MEAN	•	8.5	5.63	0.48	1.222	0.39	0.87
ARITH. STD. DEV	:	8.5	6.17	0.47	1.242	0.40	0.62
GEOM. MEAN	•	5.3	3.65	0.30	0.767	0.25	0.63
GEOM. STD. DEV.	:	3.0	2.60	3.04	2.942	3.33	2.53
1ST QUARTILE	:	2.9	2.18	0.13	0.447	0.08	0.36
2ND QUARTILE	:	6.3	3.52	0.30	0.806	0.28	0.75
3RD QUARTILE	:	11.3	6.50	0.67	1.531	0.57	1.28

199.54